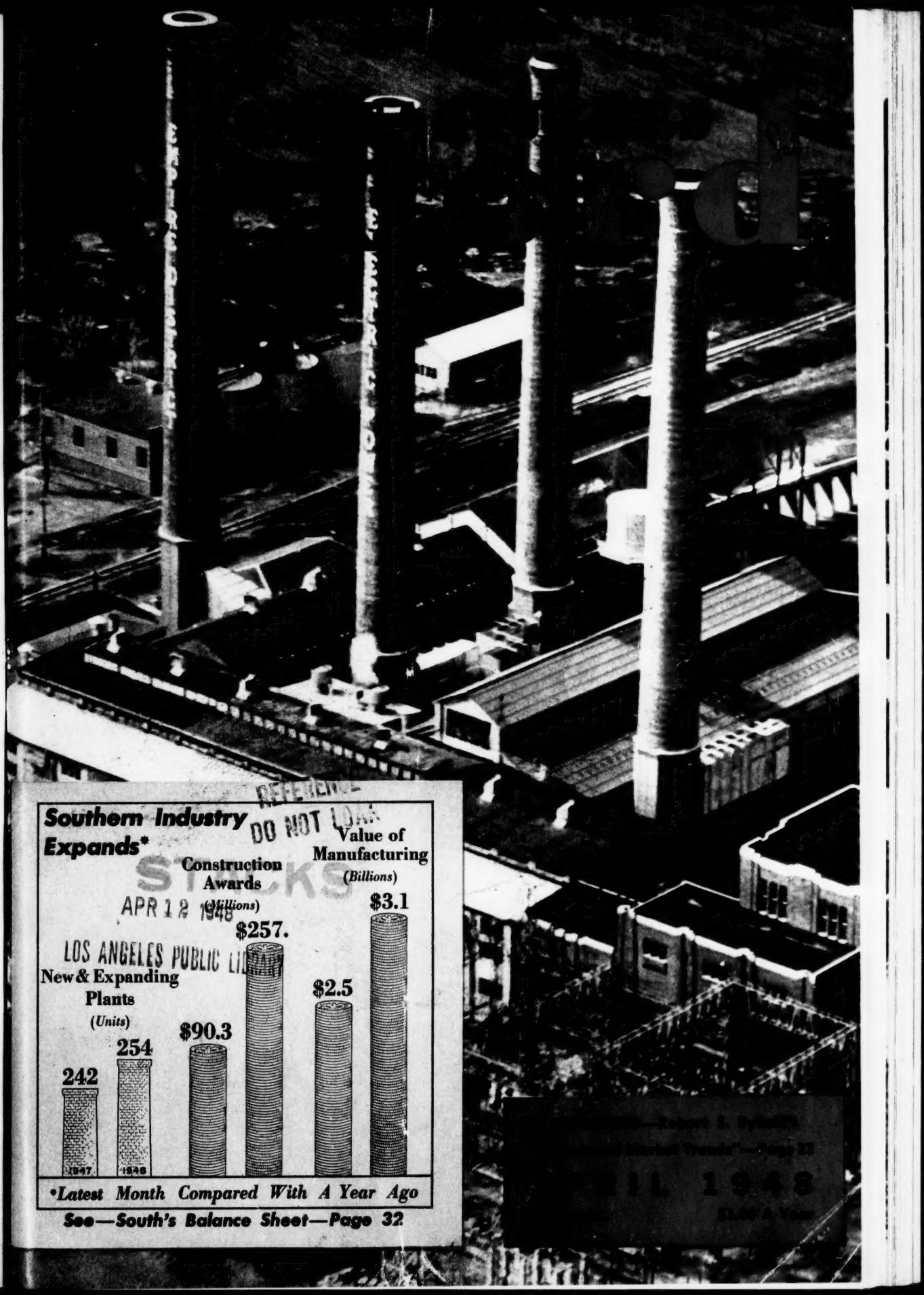

See—South's Balance Sheet—Page 32

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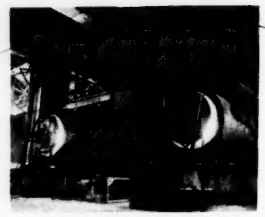
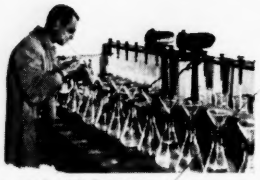
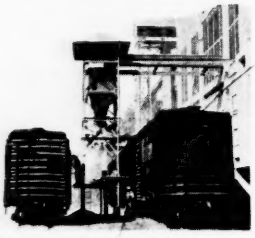


Rotary drying machines.

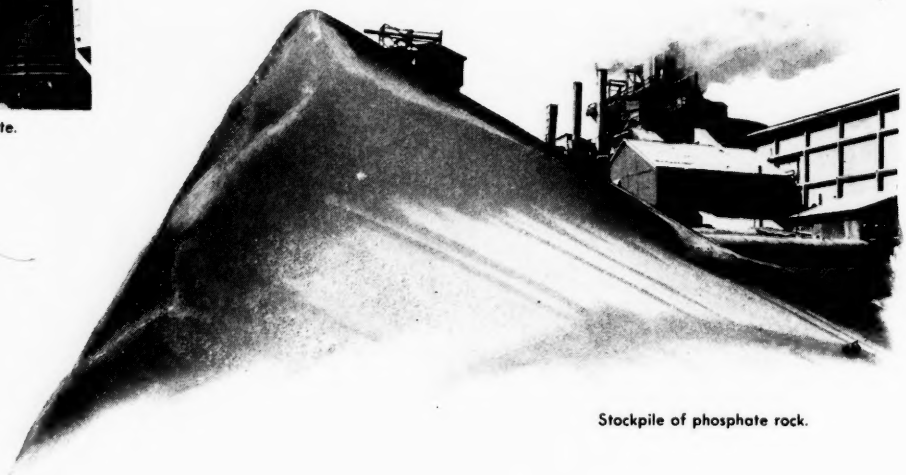


Phosphate analysis laboratory.

HOW INTERNATIONAL PREPARES LIFE-GIVING PHOSPHATES AT ITS FLORIDA OPERATIONS



Loading boxcars with phosphate.



Stockpile of phosphate rock.

Phosphates are shipped by rail from the washing and recovery operation to the drying and grinding plant; upon arrival, the contents of each car, according to their analysis, are stored in stockpiles of similar grade.

Depending upon specifications, the various grades of phosphate are then blended and transported, via conveyor belts, to the rotary dryers.

After passing through the rotary dryers, the phosphate is conveyed either to the storage bins which feed the grinding mills or to the storage bins for unground phosphate. Both the ground and the unground phosphate is then loaded directly into waiting boxcars.

The final operation is a laboratory analysis of each car. This assures greater accuracy to grade specifications and greater satisfaction to the customer.

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MINERALS & CHEMICAL CORPORATION

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This is the last in a series of 3 pictorial descriptions showing primary operations in the Mining, Recovery and Preparation of International Phosphate Rock for use in industry and agriculture.

MANUFACTURERS RECORD

ESTABLISHED 1882

Devoted to the Industrial Development of the South and Southwest

ABC

Volume 117 | April, 1948 | Number 4

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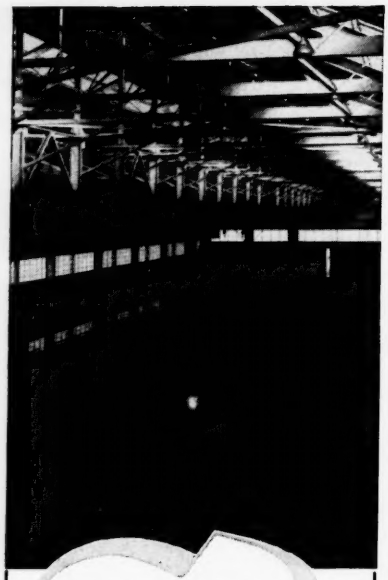

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UNITED STATES STEEL

COVER ILLUSTRATION—Since the close of the war, Southern industrial progress has soared to a high pinnacle. The graph on this month's cover shows just what the industrial picture looks like in a representative month. The figures presented are explained in greater detail in other departments: New and Expanding Plants; Construction; Southern Business Outlook; and Industrial Expansion. The important fact is that as industry expands, the South's income grows. In turn, with a greater income, more capital is available for further industrialization.

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B — At Morgan's, preliminary sketches are prepared by our experienced designers. These are critically examined by our staff, and the best elements of each selected, and consolidated into a finished design.

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"We are delighted with the pin that you have developed for us and certainly appreciate the fine way in which you have worked with us in this matter."
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Office Manager

Morgan's Inc
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Southern Business Outlook

Up to the present, there appears little evidence that the rather severe drop in commodity prices that occurred soon after the turn of the year is having significant effect upon business activity in general. Industrial and commercial activity in the 16 Southern states continues on a lofty plane—nearly 100 per cent above the 1935-39 average.

Drops in the current series of Southern Business Outlook, where they occur, can almost entirely be attributed to the shorter business span afforded by the month of February, rather than to any lessening in activity.

Indications for the longer term than the immediate present, however, are inconclusive. A noticeable increase is apparent, both in the number of business failures, and the liabilities attending them. According to Dunn & Bradstreet's latest release, "not since 1933 have liabilities reached a higher total in February." Along with this showing, are reports from many sections of trade indicating that buyers are slower in placing new orders than in the recent past.

Credit conditions appear to be gradually tightening, and the excess of exports over imports has narrowed substantially. At the very least it can be said that inflationary pressures are being diminished.

MONTHLY INDUSTRIAL ACTIVITY

(16 Southern States)

	Latest Month	*Preceding Month*	*Year Ago*
All Manufacturing	$ 3,108,188,000	$ 3,131,147,000	$ 2,564,064,000
Durable Goods	$ 1,075,916,000	$ 1,121,465,000	920,615,000
Nondurables	$ 2,032,272,000	$ 2,009,682,000	1,643,449,000
Steel Output (tons)	1,222,000	1,200,000	1,213,000
Pig Iron Output (tons)	874,000	869,000	868,000
Cotton Consumed (bales)	763,000	660,000	836,000
Spinning Activity (1000 spin-hrs.)	9,084,000	7,890,000	8,729,000
Pine Lumber Cut (board feet)	56,749,000	69,378,000	66,057,000
Electric Output (1000 kw-hrs.)	7,959,000	7,662,000*	7,296,000
Construction Awards	$ 256,999,000	$ 220,569,000	$ 90,377,000

FARMS AND MINERALS

Farm Marketings	$ 679,260,000	$ 998,406,000	$ 674,527,000
Meat Slaughter (head)	992,000	1,585,000	1,102,000
Coal Output (tons)	25,529,000	28,020,000	23,881,000
Petroleum Output (barrels)	102,108,000	108,033,000	84,645,000

FINANCE AND DISTRIBUTION

New Corporations (number	2,551	2,318	2,394
Business Failures (number)	66	47	26
Bank Deposits	$10,140,000,000	$10,132,000,000	$ 7,864,000,000
Bank Clearings	$ 6,284,000,000	$ 7,759,000,000	$ 5,512,000,000
Retail Sales	$ 1,988,000,000	$ 4,479,000,000	$ 1,915,000,000
Carloadings	1,129,000	1,359,000	1,159,000

MANUFACTURING EMPLOYMENT

(Persons Employed)

	Durables		*Nondurables*		*All Manufacturing*	
	Latest Month	*Preceding Month*	*Latest Month*	*Preceding Month*	*Latest Month*	*Preceding Month*
Alabama	137,800	139,700	94,200	95,200	232,000	223,100
Arkansas	50,100	48,100	24,800	23,800	74,900	67,500
Florida	33,300	33,400	53,900	52,600	87,200	90,600
Georgia	70,300	67,800	189,100	189,600	259,400	257,900
Kentucky	61,900	64,100	69,200	69,000	131,100	122,800
Louisiana	55,900	56,400*	84,400	85,900	140,300	132,800
Maryland	114,000	115,000	112,000	115,000	226,000	238,000
Mississippi	58,800	57,900	36,000	34,900	94,800	85,100
Missouri	153,700	153,300	212,400	212,600	366,100	333,100
N. Carolina	90,900	90,700	289,200	289,600	379,900	371,800
Oklahoma	20,900	20,800*	35,500	36,200*	56,400	54,600
S. Carolina	37,600	36,500	159,800	156,900	197,400	180,300
Tennessee	93,900	93,500	159,800	159,200	253,700	245,500
Texas	141,400	141,900	201,500	204,900	342,900	324,800
Virginia	67,900	67,500	145,400	147,800	213,300	211,400
West Virginia	86,200	88,200	48,700	50,700	134,900	127,300
South	1,274,600	1,274,800	1,915,900	1,923,900	3,190,300	3,066,600

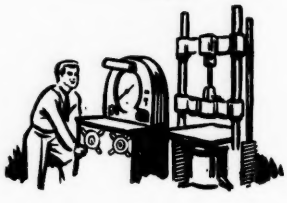
*Revised.

Of the above tabulation, data for Florida are figures rounded to nearest thousand from the monthly statistical report of Florida Industrial Commission; Georgia, Department of Labor; Maryland, State Department of Labor and Industry; Louisiana, Louisiana State University, College of Commerce; North Carolina, State Department of Labor; Oklahoma, State Employment Security Commission; Tennessee, State Department of Employment Security; Texas, the University of Texas, Bureau of Business Research; Virginia, Department of Labor and Industry. In the absence of cooperative aid from other states, the remaining figures are result of monthly surveys by MANUFACTURERS RECORD.

Controlled QUALITY

FORGINGS

FROM THE RAW MATERIALS



THE QUALITY of DIXISTEEL forgings is rigidly controlled in each phase of production—from raw material to finished product.

OUR CHEMICAL LABORATORY provides constant and dependable data on the chemistry of each heat. Thus, quality is controlled at the very beginning in our Open Hearth Furnaces.

IN OUR MECHANICAL TESTING LABORATORY, equipped with modern facilities, the finished forging is given exhaustive physical tests for maximum tensile and impact strength, toughness and high fatigue resistance. Qualities necessary to meet exacting service conditions.

ACCURATE WRITTEN RECORDS are kept of each heat from open hearth furnace to the finished product. Quality is controlled in each step of manufacture as the product is routed through our plant.

THUS, DIXISTEEL quality is controlled from raw material to finished product.

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ATLANTIC STEEL COMPANY

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The Southern Spotlight

The Piedmont Area

BY J. A. DALY

Charlotte—Large backlogs for Piedmont industries, such as textiles, furniture, machinery, steel and construction materials point to at least several more months of high level payrolls. Irregularity of commodity market in February engendered caution among business men. In all divisions of Piedmont business, insistence was on quality and moderate prices.

RETAIL TRADE

• **Sales.** Area's pre-Easter retail dollar volume moved slightly above 1947. Demand for higher priced luxury goods eased somewhat. High prices in both men's and women's items met pronounced resistance.

• **Food.** Sales held at high levels though buying was selective. Prices emphasized in expanded advertising. North Carolina's Alcholic Beverage Control Board reported 1947 sales at $41,053,234.

• **Durables.** Business became conservative, retailers shied away from long term commitments. Radio and refrigerators showed narrow declines.

• **Credit.** Bureaus report that monthly totals of individual credit ratings were 15 per cent above the same 1947 period and increasing. Past due accounts increased moderately, eliciting warnings from merchants' associations.

PRODUCTION

• **Fuel.** Carolina Retail Fuel dealers doubt if production will create an adequate supply of fuel for next winter.

• **Furniture.** Factories reported irregular, moderate declines in production, especially in lower priced lines. Retailers sought higher priced furniture, particularly speciality designs.

• **Textiles.** Cotton textile manufacturers, late in March, were operating at unchanged rates. Backlog of orders heavy. Prices steady but new business at low level due to February break in cotton future prices. Entire textile industry braced itself for possible flood of military orders.

• **Chemicals.** Conditions were favorable in industrial chemical industries as March ended. Farm interests complained of shortages of nitrate and potash for fertilizer.

AGRICULTURE

• **Production.** Carolina farmers were two to three weeks behind in preparation of land for planting due to unfavorable weather. Cotton acreage is expected to be about the same as in 1947. Flue cured tobacco acreage will be reduced 28 per cent under government controls.

• **Sales.** Growers' 1947-48 sales of 886,367,538 pounds of tobacco brought $376,609,368 averaging $42.43 per hundredweight. State government statisticians reported that South Carolina farm prices dropped 6 1/4 per cent during the month ended February 15, widest fall since 1920.

EMPLOYMENT

• **Jobs.** State-Federal employment offices reported marked irregularity in Piedmont area job replacements late in February and through March. Several Textile communities reported job seekers outnumbering openings two to one. As a whole, unemployment was small and seasonal gains were developing. Skilled labor scarcity persisted. High costs of living were influencing many women to re-enter the labor force.

FINANCE

• **Bank Resources.** Banking Commission data showed that resources of North Carolina's state and national banks totaled $2,007,105,755, new high, at the start of 1948, compared with $1,694,197,235 on January 1, 1947. The 152 state commercial banks had resources of $1,432,744,773 against $1,401,771,025. Capital increases in 1947 for all banks totaled $5,717,121.

• **Stocks.** Over the counter prices for Southern textile mill common stocks were irregular and trade was inactive as April approached. The average bid for a list of 60 stocks was $122.90, compared with the 1947-'48 high of $123.36, set late in January shortly before cotton future prices declined widely.

The Southeast

BY JOHN MEBANE

Atlanta—Recent possibilities of another war combined with President Truman's proposal for Universal Military Training and installation of the draft disturbed business leaders in this area. As yet no immediate effect on the region's economy has been felt.

RETAIL TRADE

• **Sales.** Persistent rains cut volume of Easter shopping. Small towns hardest hit as farm shoppers stayed at home. Merchandise still eagerly sought. Clear weather brought new spurt in retail buying. Some merchants believe "money is tightening up." Department store sales remain high. In Sixth Federal Reserve District sales for January 1948 topped January, 1947.

• **Food.** Food and groceries hit new high in Atlanta in 1947. Buyers spent $100,000,000, 170 per cent more than in 1939. Volume has increased as well as prices. High food prices, though, have left spenders with less for other commodities, and prices still move up.

AGRICULTURE

• **Prices.** Food prices paid by farmers rose 12 per cent last year. This year, additional increases may significantly affect parity prices, says Federal Reserve Bank. Almost half of food price index is composed of prices paid for meat supplies and animal products. Prospects for smaller meat supplies and active consumer demands might cause rapid price rise in next few months.

• **Milk.** Production of milk for sale in Georgia has risen 400 per cent. Continued growth will require new outlet for sales to keep pace with production.

• **Income.** Production value of crops rose throughout the entire Southeast in 1947. Attributed to improved farming methods. In Georgia, improved methods increased crop value to $446,491,000. Mechanization and soil conservation given chief credit.

UTILITIES

• **Power.** Georgia Power Co. filed petition this month asking emergency increase in electric rates. Company would discontinue 10 per cent discount for prompt payment of bills to relieve "critical financial situation." New rate schedules proposed would bring in $4,000,000 more annually. No changes

(*Continued on page* 12)

(*Continued from page* 11)

sought in charges to REA Co-operatives, to municipalities buying power for resale to citizens or in rates for municipal water pumping and street lighting. Company has had no increase in electric rates since formation 21 years ago.

• **Earnings.** Though earnings increased 11 per cent in 1947, Southern Bell Telephone & Telegraph had a gain in expenses of 15.4 per cent to put actual earnings "at the lowest rate in over 40 years." Net earnings rate for the year was 2.30 per cent on its stock par value. However, construction for the company during 1947 was 62.5 per cent greater than in 1946 the previous record year.

Birmingham District

BY R. W. KINCEY

Birmingham—More production capacity is needed in this area. That the Southeast section is destined to become an increasingly important consumer of raw materials seems to have been overlooked in some quarters.

RETAIL TRADE

• **Sales.** Retail sales are at or above the level of a year ago. Department store sales are off somewhat, as are furniture sales and those of speciality stores. General trend, though, is fairly well maintained.

PRODUCTION

• **Steel.** Steel remains at near capacity. But the coal strike clouds the future. As March ended, the score in the coal strike at Birmingham was: T. C. I., four open hearths and four blast furnaces at Ensley down. Rail mill at Ensley also down; Woodward Iron Co. minus one furnace. Other entrenchments planned in addition to lay-offs by railroads. The loss will increase the already insistent pressure for iron.

• **Cut-backs.** At month's end, cut-backs in production had been held to a minimum. But operating schedules were being formulated on a day to day basis. As extended coal strike will severely penalize industrial production, especially in view of the already short inventories of raw materials.

• **Orders.** Production continues to attract attention. Pullman-Standard Car Co. at Bessemer produced 1,005 freight cars in February, placing the company's Southern operations up among the leaders.

• **Shipbuilding.** Emphasis on shipbuilding in the South, already in the status of a major endeavor, was in the public eye again with two new major contracts for Ingalls both of which will use a large tonnage of Birmingham steel. One was an oil tanker for the Texas Co. at a cost of $2,310,000. The other was conversion of the SS Richardson from a troop carrier to luxury liner for American President Lines at a cost in excess of $5,000,000.

EMPLOYMENT

• **Jobs.** A report by the U. S. Employment Service indicates well sustained payrolls, despite some indications otherwise in some quarters and an increase in job replacement in February over the same month last year, although a relatively few more applications for jobs were on hand.

FINANCE

• **Bank Deposits.** An increase in bank debits for the first quarter of the year is indicated over the same period last year, while savings deposits have shown a slight increase or approximately 5 per cent.

The Southwest

BY DAN SUMMERS

Dallas—With the first sign of spring, builders commenced work on the greatest backlog of construction orders in history. Long awaited materials are now available. If good weather continues, construction may reach record totals in 1948.

RETAIL TRADE

• **Sales.** For department stores, the ratio of credit sales to total sales showed an increase, and collections on installment accounts have made a substantial drop. Sales rose an estimated 12 per cent up to the middle of March, the highest gain of 24 per cent being scored in Houston. Coastal cities registered the largest percentage gain in sales after having missed the severe cold of North Texas, Oklahoma, and Arkansas.

• **Inventories.** Inventories of merchandise in the large department stores over the Southwest showed heavy gains over those of early 1947. Attributed largely to prolonged inclement weather.

AGRICULTURE

• **Production.** Below freezing March winds accounted for heavy agricultural losses in many sections of the Southwest and almost reached the thin-blooded Valley region and its tenderly nursed crops. Freezing temperatures however, missed few vegetable crops and managed to cause some damage if not killing blows. Milling in Oklahoma and Kansas is reported high, yet wheat stocks in the Southwest area are twice those of last year at this time. At the first of the year, Texas reported almost a 125 per cent gain over its stock a year ago and Oklahoma showed 64 per cent more on hand. New Mexico had five times the stock it reported in early 1947.

CONSTRUCTION

• **Residential.** There are more than $100,000,000 in residential contract awards alone in the Southwest this year, which is only about two-fifths of the total contract awards held early this year. Difficulties in obtaining mortgage credit for financing much of this work have been encountered. This obstacle in financing may cause a considerable drop in the estimates on dwelling completions this year and an increase in commercial-type building.

• **Labor.** The supply of skilled craftsmen, although considerably improved at the end of last year, still offers the most uncertain picture of this year's construction. Increased orders for work likely will leave the industry still short of manpower.

FINANCE

• **Taxes.** The income tax again threw its hard blow on bank deposits. Corporation as well as individuals wrote big slices out of their deposits, a surprising portion of which will perhaps get back into the bank through generous income tax returns this year.

• **Loans.** Becoming more conspicuous are the decreases in bank loans. Reasons that promise greater production in scarce materials rather than "make money" objectives are more in demand on commercial industrial and agricultural loans. The American Bankers Association calls it a "voluntary credit control program" and preached it convincingly to Southwest bankers.

NEW AND EXPANDING PLANTS

COMPILED FROM REPORTS PUBLISHED IN THE DAILY CONSTRUCTION BULLETIN

ALABAMA

BIRMINGHAM—Mary Ball Ice Cream Co., alterations.

BIRMINGHAM — Carpenter Oak Flooring Co., dry kiln, $50,000.

BIRMINGHAM—Knight Electric Co., office and warehouse buildings.

BIRMINGHAM — Moore-Handly Hardware Co., acquiring Bechtol-McCone property.

BIRMINGHAM—J. D. Pittman Tractor Co., alterations and additions to building, $201,500.

BIRMINGHAM—F. H. Ross and Co., Inc., warehouse, corner 12th St. South and 2nd Ave. South.

BIRMINGHAM—Sanitary Mattress and Rug Cleaning Co., addition to plant.

FAIRFIELD — Tennessee Coal Iron and Railroad Co., office building.

JACKSONVILLE—Consumers Textile and Manufacturing Corp., textile factory, $75,000.

SILURIA—Valley Mills, Inc., plan new cotton mill.

ARKANSAS

FORT SMITH—Campbell Soup Co., canning plant, $15,000.

HOPE—Temple Cotton Oil Co., sweet potato dehydrating plant, Highway 29 and Avenue B.

JONESBORO—Arkansas Rice Growers Association, rice drying plant and improvements, $700,000.

JONESBORO—Jonesboro Grease Extracting Co., plant near Highway 63, $50,000.

LITTLE ROCK—Linde Air Products Co., building to be used for producing oxygen and acetylene, south of W. 29th St., $55,000.

FLORIDA

BRADENTON—Chapman Newspapers, press room, $80,000.

DADE COUNTY — Radio station WGBS, transmitter station.

FORT LAUDERDALE — Gore Publishing Co., press building, SE First St., $85,000.

JACKSONVILLE—Southern Bell Telephone Co. (Atlanta), exchange building, $700,000.

MIAMI—Libby Post, warehouse and office building, 1100 NW 23rd St., $120,000.

MIAMI—Maule Industries, Inc., commercial building warehouses, 2925 N. Miami Ave., $95,000.

MIAMI — McKesson-Robbins, Inc., warehouse, SE corner, NE 2nd Ave. and 75th St.

MIAMI — Southland Chevrolet, Inc., truck service building, NW 18th St. at First Ave., $66,145.

PENSACOLA—City, purchased natural gas business of Gulf Power Co., $2,000,000.

ST. PETERSBURG — Sunshine Television Co., channel for the St. Petersburg district, $500,000.

GEORGIA

ATHENS—Hayward-Allen, auto sales and service building.

ATLANTA — Atlanta Journal, transmitter building, $14,000.

ATLANTA—Peaslee-Gaijbert Corp., warehouse, southern side of Peters St.

ATLANTA—Safway Steel Scaffolds Co., office and warehouse.

ATLANTA—Southern Bell Telephone and Telegraph Co., building addition, $55,000.

ATLANTA—Southern Mills, Inc., timber mill addition, $113,733.

ATLANTA — L. V. Sutphin Co., concrete warehouse, Victoria and John Sts.

ATLANTA—West Lumber Co., alterations and additions.

ATLANTA — White Provision Co., boiler room and additional floors to present plant, Howell Mill Rd. and 14th St. NW.

AUGUSTA—Georgia Railroad plans rebuilding, $50,000.

BRUNSWICK—Brunswick Pulp and Paper Co., expansion of production facilities.

COLUMBUS—Wells Motors, Inc., auto sales and service building, $129,800.

LAVONIA—A. J. Bartson, Inc., plant for manufacturing furniture upholstery, $500,000.

KENTUCKY

CALVERT CITY—Pennsylvania Salt Manufacturing Co., fluorine chemical plant, $3,000,000.

LeJUNIOR—Silver Star Coal Co. coal tipple, head house, "shute," etc., $50,000.

MT. STERLING — Home Tobacco Ware house, warehouse, $25,000.

MOUNTAIN ASH—B and H Blue Gem Coal Co., tipple, head house, other buildings and new machinery, $75,000.

PIKEVILLE—Little Card Coal Co., tipple and head house, $25,000.

LOUISIANA

LOUISIANA — Pan American Engineers, Alexandria, plan gas pipe line from recycling plant at St. John to towns of Waterproof, Newellton and St. Joe.

BATON ROUGE—General Chemical division, Allied Chemical and Dye Co., addition to plant, $1,630,000.

BATON ROUGE—Singer Sewing Machine Co., additions and remodeling building, 163 Third St.

BOGALUSA—Bogalusa Tung Oil Processing Co., addition to plant, $50,645.

DONALDSONVILLE—M. Trelles and Co., plan cigar plant, $39,250.

DUBACH—G. M. Tremmel, plans oak flooring mill, $39,200.

EOLA—Anchor Gasoline Corp., absorption plant, $406,709.

EUNICE—Fre-Zit Foods, locker and food processing plant, $68,000.

GRETNA—Borden Co., creamery and ice cream factory, Airline Highway, $733,000.

HAMMOND—Oliver Treated Products Co., addition to creosote plant, $20,000.

JEFFERSON PARISH—Boyce-Harvey Machinery Co., plans caterpillar tractor factory.

JEFFERSON PARISH—Green-Walker Co., plan galvanizing plant.

LAFAYETTE—Coca-Cola Bottling Co., of Lake Charles, plant, $266,000.

LAFAYETTE—Keller's Bakery, two-story building, $40,397.

LAKE CHARLES—Mathieson Alkali Works, soda ash plant, $2,978,300.

LAKE CHARLES—Ed Taussig, alterations to present auto sales and service building, $73,341.

LOCKPORT—Valite Corp., plant for manufacture of plastics from bagasse, $135,022.

New and Expanding Plants Reported:
March—254
Total For First Three Months Of 1948: 738

First Three Months Of 1947: 704

MAMOU—Magnolia Petroleum Co., casing head gasoline plant, $940,000.

MARKSVILLE—Squire Bottling Co., plant, $35,000.

MINDEN—Sanitary Dairy Products Co., creamery and ice cream plant, $55,000.

NEW IBERIA—Acadian Pontiac Co., auto sales and service building.

NEW ORLEANS — Blue Seal Bottling Works, remodeling and installation of new machinery, $59,695.

NEW ORLEANS — Gulf Shipside Storage Corp., plans wharf facilities, $500,000.

NEW ORLEANS—Hardin Bag Co., planning warehouses, land bounded by Almonaster, Port, N. Peters and Decatur.

NEW ORLEANS—Hires Bottling Co., addition to plant, $50,000.

NEW ORLEANS—Holsum Bakeries, Inc., bakery on Howard Ave., $1,000,000.

NEW ORLEANS—Liquid Carbonic Corp., addition to plant, 627 Filicity St.

NEW ORLEANS—National Cylinder Gas Co., acetylene gas plant on old Gentilly Highway.

NEW ORLEANS—New Orleans Public Service, Inc., pipe storage shed and crane at Perdido and Magnolia Sts.

NEW ORLEANS—Southern Bell Telephone Co., expansion program, $7,000,000.

NEW ORLEANS — Standard Coffee Co., planning warehouses, land bounded by N. Peters, Marigney, Mandeville and Decatur.

NEW ORLEANS—Ware Cotton Batting Co., plant, $200,000.

PINEVILLE—Pineville Wood Products Co., Inc., addition to plant, $67,000.

PORT BARRE—O. L. Pollingue and Sons, rice drying plant, $65,000.

SHREVEPORT—KTBS radio station, new building for transmission equipment.

SHREVEPORT—Meriwether Supply Co., bulk plant, 1726 Southern St., $20,000.

SHREVEPORT — United Gas Pipe Line Co., Hays Field project.

WINNSBORO — Franklin Parish Locker Plant, new plant, $55,389.

MARYLAND

BALTIMORE—American Oil Co., American Building, service station, Reisterstown Rd.

BALTIMORE — Balmar Corp., addition to office building.

BALTIMORE—Baltimore Foundry and Machine Corp., addition to plant and other improvements.

BALTIMORE—Charles T. Brandt, Inc., addition to shop, Bush and Ridgley Sts.

BALTIMORE — Chesapeake and Potomac Telephone Co., planning extensions and improvements; $10,800,000.

BALTIMORE—Consolidated Gas, Electric Light and Power Co., construction program, $15,000,000.

BALTIMORE — Louis Crystal, storage building, 2123 Kirk Ave., $10,000.

BALTIMORE — Cumberland Coal Co., office, 800 S. Carey St.

BALTIMORE — Milton B. Edelson, auto sales and service building, 510 N. Hilton, $129,000.

BALTIMORE — Esso Standard Oil Co., alterations at refinery, Highlandtown.

BALTIMORE—L. V. Gordon and Son., Inc., receiving room.

BALTIMORE — Griffith and Boyd Co., alterations and addition, Fort Ave., and Andrea St.

BALTIMORE — Hampden Corp., office and warehouse building, 2810 Hampden Ave., $28,000.

BALTIMORE — James Distillery, addition, 800 Key Highway, $10,000.

BALTIMORE — Al Lissberger, manufacturing and storage building, 1240 Key Highway, $18,000.

BALTIMORE — Rabai's Bakery, addition to bakery, 5110 Park Heights Ave.

BALTIMORE — Roadway Express, service building, 240 S. Kresson St.

BALTIMORE — Edward St. John, storage building, 5330 Reisterstown Rd., $20,000.

BALTIMORE — Charles A. Spann, ice cream plant and retail store, 4320 Erdman Ave.

BALTIMORE — Swift and Co., alterations to plant, 300 S. Eutaw St., $45,000.

BALTIMORE—Wachter, Hoskins and Russell, warehouse, 945 E. 30th, $100,000.

BALTIMORE — Warner Cartons, Inc., storage building, 2104 Oler St., $18,000.

BALTIMORE—Western Maryland Railway Co., scale house and facilities, addition to warehouse and office.

BALTIMORE COUNTY — Alban Tractor Co., sales and service building, SE side Pulaski Highway and Golden Ring Rd., $100,000.

BALTIMORE COUNTY — James S. Stenerson, Cockeysville, Esso Filling station, north of underpass, $10,000.

BALTIMORE COUNTY — United Clay Mines Corp., mill building, SW corner Pulaski Highway and Middle River Rd., $12,000.

BOWIE — Maryland Racing Commission, improvement program at Bowie, $277,000.

LAUREL — Maryland Racing Commission, improvement program, $276,000.

MARLBORO — Southern Maryland Agricultural Association, improvement program.

SPARROWS POINT — Patapsco and Back River Railroad Co., locker building, diesel locomotive repair shop and office shop and repair buildings.

MISSISSIPPI

MISSISSIPPI — Committee on Nitrogen Plant for Miss., plans nitrogen fertilizer plant, $15,000,000.

BILOXI — Southern Bell Telephone and Telegraph Co. (Atlanta, office building.)

COLUMBIA — J. D. Pickett, plant for the manufacture of paints.

CORINTH — City, expansion of Artcraft Hosiery Co. plant, $25,000.

HATTIESBURG — McMullen Equipment Co., one-story building, $52,470.

JACKSON — Great Southern Box Co., acquiring additional building, 17,000 square feet of floor space.

JACKSON — Illinois Central Railroad has remodeling program underway, $90,000.

JACKSON — Weaver Lumber and Plywood Co., rebuilding burned plant, $100,000.

LUCEDALE — George County Board of Supervisors, veneer mill for Lucedale Veneer Co., $44,720.

NEW AND EXPANDING PLANTS

MERIDIAN — Southern Bell Telephone and Telegraph Co., dial office building.
RICHTON—Board of Supervisors of Perry County, factory building to be occupied by Lebanon Shirt Co., $150,000.
VICKSBURG — Ely Walker Dry Goods Co., of St. Louis, negotiating for site to manufacture ladies' dresses.

MISSOURI

KANSAS CITY — Kansas City Envelope Co., plant and office building, 2014 Washington St., $100,000.
LAMAR — Hutchens Metal Products Co., farm wagon and implement factory, $125,000.
ST. LOUIS—Kayem Co., metal addition to factory, 700 S. Spring, $95,000.
ST. LOUIS — Lambert Pharmacal Co., alterations, 2117 Franklin Ave.
ST. LOUIS — Joseph Lipic Pen Co., acquired plant, corner Gravois and Devolsey Aves., plan improvements, to be used for manufacture of pens and pencils.
ST. LOUIS — Mines Equipment Co., addition for offices, 4235 Clayton, $50,000.
ST. LOUIS — John Nooter Boiler Works, manufacturing building, 117 Mill St., $50,000.
ST. LOUIS—Pioneer Paper Co., warehouse, 2311 Chestnut, $30,000.
ST. LOUIS — Vincel Pontiac Co., auto agency building, corner Fyler Ave. and Kingshighway, $200,000.
ST. LOUIS COUNTY—Willis Julier, garage and swimming pool, Topping Rd.

NORTH CAROLINA

CHARLOTTE — Ralston Purina Co., addition to frame mill, elevator and warehouse.
CHARLOTTE — F. H. Ross, Jr., and J. M. Ross, warehouse.
CHARLOTTE — State Beauty and Barber Supply Co., building, corner College and 11th Sts., $60,000.
GREENSBORO—Bates Nite-wear Co., manufacturing building.
HICKORY — Lovelady Mill, plans building for manufacture of full-fashioned women's hosiery.
MORGANTON — Great Lakes Carbon Co., has purchased National Carbon Co. plant from WAA.
MOUNT ULLA — Mount Ulla Flour Mill, new feed mill, flour mill and warehouse buildings to replace those destroyed by fire.
SHELBY — Carolina Dairy, Inc., additions to plant.
TABOR CITY—Corbett Bros. Sweet Potato Brokerage Co., warehouse.
WINSTON SALEM—International Minerals and Chemical Corp., fertilizer mixing plant, adjacent to Southern Railway.

OKLAHOMA

ARDMORE — Fleet Coop Motor Co., sales and service buildings, 708 W. Broadway.
DEWEY — Dewey Portland Cement Co., plans improvements to plant.
MOORELAND — Charles E. Darrow, wood products factory, $40,000.
PONCA CITY — David J. Sutton, auto agency building, 5th and Central, $74,995.
SHAWNEE—C. T. Sherry, moving canning plant from Rogers, Ark., to Shawnee.
ARDMORE — Sinclair Prairie Oil Co., constructing products line.
TULSA—Oklahoma Natural Gas Co., plans development of gas reserves and production facilities, etc., $7,000,000.
TULSA—Public Service Co. of Okla. plans $20,000,000 expansion program.

SOUTH CAROLINA

ANDERSON — Anderson Industrial Buildings, Inc., to build textile mill to be leased to Haynesworth Mill, $400,000.
COLUMBIA—Stone Manufacturing Co., acquired Saluda Underwear Co., Eau Claire plant, for manufacture of underclothing.
GREENVILLE—J. P. Stevens and Co., Inc., New York, has acquired approximately 800 acres in upper Greenville County for future development.
LANCASTER — Lancaster Implement and Truck Co., building, $30,250.
LANCASTER—Springs Cotton Mills, office building.

TENNESSEE

CHATTANOOGA—Clay F. Church, Marion, Va., has acquired stock of Dr. Pepper Bottling Co. and plans expansion.
JACKSON—American Creosote Works, Inc., factory building containing 30,000 feet of floor space.
JACKSON — Manufacturers Battery Co., branch plant site selected, $250,000.
MEMPHIS—Memphis Light Gas and Water Division, expansion of gas and power facilities.
MEMPHIS—Southern Bell Telephone and Telegraph Co., addition to building, $2,633,000.
MEMPHIS—Westinghouse Electric Supply Co., office and warehouse on an extension of N. Main.
NASHVILLE—Bradley Candy Co., expansion, 701 Murfreesboro Rd., $25,000.
NASHVILLE—John T. Cooper, rebuilding service station and garage recently lost in fire, Zoppie St. and Gallatin Rd., $15,000.
NASHVILLE — Louisville and Nashville Railway, 6 RR branch lines, $993,000.
NASHVILLE—Tennessee Gas Transmission Co., additional supply lines and enlarging compressor stations, $16,275,000.

TEXAS

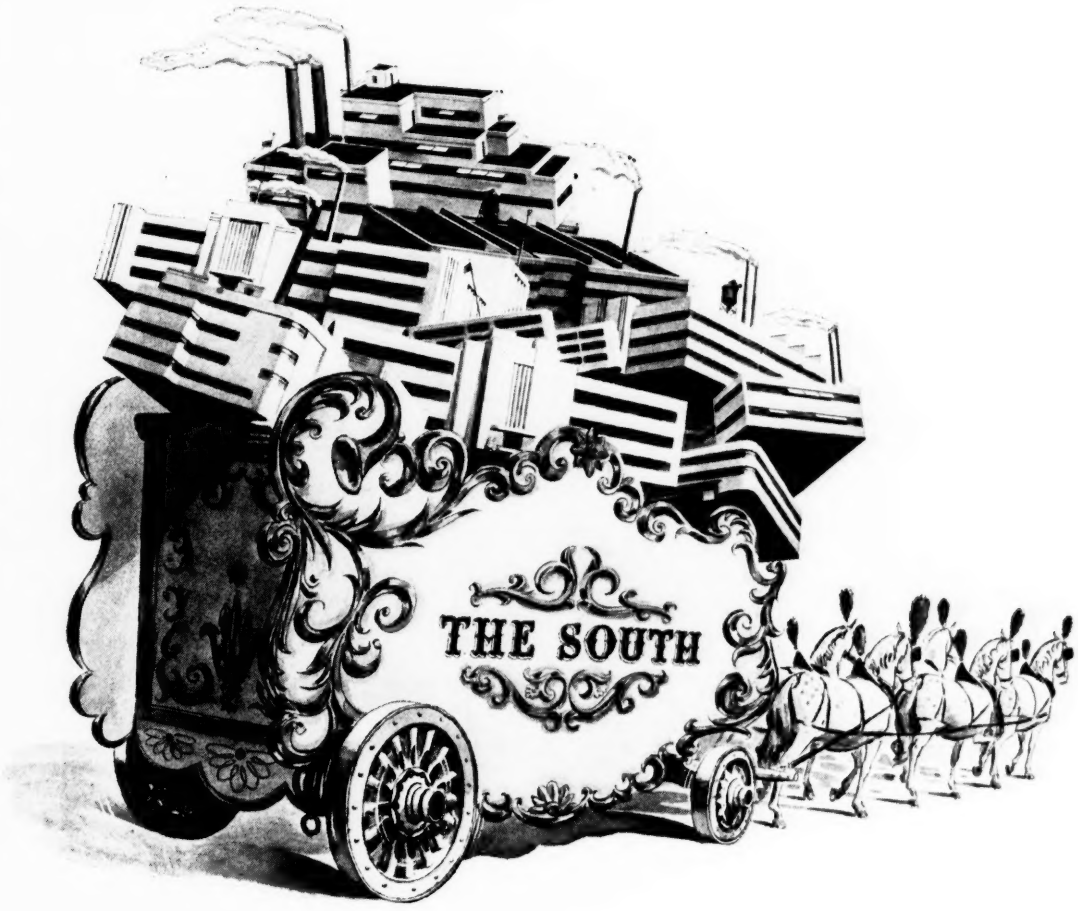
Texas Eastern Transmission Corp., plans third "Big Inch" pipe line parallel to present lines.
Transcontinental Gas Pipe Co., natural gas system, $150,000,000.
ALICE — Lane Talburt, garage and store building, $40,000.
ALICE—Lone Star Wholesale Grocery Co., warehouse, $35,000.
AUSTIN—F. E. Bates, Sr., plans passenger station.
BAYTOWN—Humble Oil and Refining Co., expansion program, $19,000,000.
BEAUMONT—Kinsel Motor Co., auto display building.
BEEVILLE—Hance H. Hamilton and Son, plan two stores, laundry and dry cleaning plant.
BROWNSVILLE—Carthage Hydrocol, Inc., synthetic gasoline plant.
BROWNSVILLE—Southwestern Bell Telephone Co., addition to main building.
CLEBURNE—Texas Batteries, warehouse, Adcock and Bandy, $21,750.
CORPUS CHRISTI — T. R. and E. M. Schnitz, business building, corner S. Staples and Indiana.
DALLAS—American Poster and Printing Co., business building, Akard and Gano Sts.
DALLAS—Best Foods, Inc., building for manufacturing Nuco, 710 Belleview, $46,671.
DALLAS — Binswanger and Co., business building, McKinney Ave. and Lewis Sts.
DALLAS—Doran Chevrolet, Inc., new plant, 2222 Main.
DALLAS—Dunlap-Swain Co., auto parking garage and service station, five stories, on Pacific St., $1,000,000.
DALLAS—Hollywood Manufacturing Co., plant building, 2608 Hawes St., $40,000.
DALLAS — W. W. Lynch, warehouse and office building to be leased to Winthrop-Stearns, Inc., N. Y.
DALLAS — Process Engineering Co., office building, 5631 Daniels, $32,500.
DALLAS—Yates Laundry and Dry Cleaning Co., expansion, Hall and Floyd Sts., $85,000.
FORT WORTH — Fort Worth Star Telegram, building.
FORT WORTH — Frontier Pontiac Motor Co., alterations to building, $61,162.
FORT WORTH—William L. Knowles, plywood manufacturing plant, $200,000.
FORT WORTH — Ryan Motor Co., auto sales and service building, 2401 W. 7th St., $90,000.
FORT WORTH—Texas Sash and Door Co., warehouse, Rupert and Killan Sts., $150,000.
FORT WORTH—Tex-Egg Co., Inc., plant, Jones St.
GALVESTON—Sun Oil Co., gas pipe line in Galveston Bay.
HOUSTON — Maurice Angly Lumber Co., warehouse, 1733 Ennis St.
HOUSTON — Brochsteins, Inc., expansion program, 10002 S. Main, $250,000.
HOUSTON — Coca-Cola Bottling Co., bottling plant, near Kirby Drive, $1,000,000.
HOUSTON—Crane Packing Co., warehouse and office building, Supply Row Center.
HOUSTON — Dixie Chemical Co. has acquired site on Southern Railroad, north of city on Humble Rd., for expansion of manufacturing program, $60,000.
HOUSTON—E. I. du Pont de Nemours and Co., installing equipment in gasoline testing laboratory.
HOUSTON — Emerson Meat Co., packing plant, 500 Gable St.
HOUSTON—Gulf Envelope Co., plant, N. Main at Brook St.
HOUSTON—Gulf Oil Corp., service stations, Old Spanish Trail and Alameda, and NW corner N. Shepherd and Tomball Rd.
HOUSTON—Humble Oil and Refining Co., drilling program, $65,000,000.
HOUSTON—Link-Belt Co., office building, 5100 block S. Wayside Drive, $500,000.
HOUSTON — Lynes, Inc., office and shop building, Long Drive, Golfcrest addition.
HOUSTON—Robert F. Martin, addition to present building, 5420 Lawndale Ave.
HOUSTON—National Cylinder Gas Co., addition to oxygen plant, 6201 Industrial Way.
HOUSTON—Owl Foto Service, addition to plant, 2208 Brazos.
HOUSTON—Pilgrim Laundry, addition and remodeling, 4000 Alameda Rd.
HOUSTON — J. C. Robinson, motor sales building, Harrisburg at 69th St., $76,000.
HOUSTON—Shell Oil Co., chemical plant addition in Deer Park.
HOUSTON—Sun Oil Co., natural gasoline plant in Starr County.
HOUSTON — Turbiville Motors, auto merchandizing and service plant, Main, Berry and Fannin, $375,000.
KILGORE—Humble Oil and Refining Co., addition to casinghead gas plant, $2,000,000.
LAMARQUE—Southwestern Bell Telephone Co., addition to present building.
LAREDO — Missouri Pacific Railway Co., freight depot.
McGREGOR—Norwood Manufacturing Co. has acquired portion of Bluebonnet Ordnance plant for use as furniture factory.
MIDLAND — Southwestern Bell Telephone Co., addition to present building.
NEW BRAUNFELS — John Maddox Motor Co., building.
NIXON—A. M. Marron, implement building.
PEARLAND—American Rice Growers Co-operative Association, office building.
PORT ARTHUR—Coca-Cola Bottling Co., bottling plant, warehouse and shop.
SAN ANGELO—Monarch Tile Co., addition to business building, 603 S. Oaks, $35,000.
SAN ANGELO — Mustang Chevrolet Co., business building, 23 S. Main St.
SAN ANTONIO—John Arrendo, filling station, corner Simon and Probandt Sts.
SAN ANTONIO—Carpenter Paper Co., addition to present building, 519 N. Medina St.
SAN ANTONIO — Cliquot Club Bottling plant, remodeling plant, 538 Roosevelt Ave.
SAN ANTONIO — Express Publishing Co., radio transmitter station building.
SAN ANTONIO—M. and H. Bottling Co., extension to warehouse, corner Locust and Euclid Ave.
SAN ANTONIO—Milam Creamery, creamery building.
SAN ANTONIO — Monte Carlo Cleaners, storage vault and work room, corner West Kingshighway and ZarZamora Sts.
SAN ANTONIO — Ormsby Chevrolet Co., addition to building, 457 S. St. Mary's St.
SAN ANTONIO — Radio station KYFM, transmitter building.
SAN ANTONIO—San Antonio Transit Co., administration building between N. Flores and San Pedro Aves.
SAN ANTONIO — Alan Sparger Laundry and Dry Cleaning Plant, addition, $22,912.
TEXAS CITY—Republic Oil Refining Co., purchased gasoline plant, will spend $250,000 on repairs, etc.
VICTORIA—Henry Timberlake, auto sales building and addition, Rio Grande Blvd. and Bridge Sts., $76,500.
VICTORIA—Victoria Advocate, new plant, 106 S. Williams.
WICHITA FALLS — Foster Cathead Co., office and shop building, $24,000.
WICHITA FALLS — Williams-Dwyer Co., addition to filling station, 10th and Polk, $14,000.

VIRGINIA

BOYDTON — Julius Kayser Co., branch plant for manufacture of hosiery and lingerie.
CHATHAM—American Federation of Tobacco Growers, Inc., plan warehouse for co-operative marketing system, $300,000, capitalization.
CULPEPER—Marshall Gayheart, building.
DANVILLE — Liggett and Myers, alterations to re-drying plant.
DRAKES BRANCH—Pacific Mills, Boston, Mass., has acquired land in Charlotte County for future development.
HOPEWELL—Solvay Process Co., new synthetic detergent plant.
NEWPORT NEWS—Century Ribbon Mills, Inc., factory, Hooper and Hardy site, 36th St. east of Jefferson Ave., $250,000.
NORFOLK — Old Dominion Tobacco Co., addition to warehouse, Main and Randolph Sts.
RICHMOND—Boulevard Cleaning Co., dry-cleaning plant, Chamberlayne Ave.
RICHMOND — Strong Bag Co., building, Hull St.

WEST VIRGINIA

CHARLESTON—Chesapeake and Potomac Telephone Co., improvement projects, $2,378,000.
HUNTINGTON—Chesapeake and Potomac Telephone Co., expansion and improvement program, $500,000.
WHEELING — Cloverdale Dairy, additions and alterations, 57 17th St., $30,000.



Industrial Bandwagon

SOON, the greatest industrial show on earth will be "playing" in the South!

For this progressive, fast-growing area . . . served by the 8,000-mile Southern Railway System . . . is a land of gargantuan opportunities. Here, new factories are springing up almost as fast as the "big-top" the night before a circus. Here, both old and new plants are growing to jumbo size . . . and prospering . . . thanks to a colossal list of natural and economic advantages.

So step right up! Hop aboard this industrial bandwagon! For a brighter business future . . . "*Look Ahead—Look South!*"

Ernest E. Norris
President

LOOK SOUTH
LOOK AHEAD

SOUTHERN RAILWAY SYSTEM
The Southern Serves the South

Potomac Soundings

by LAWRENCE SULLIVAN

The South

Southern Coal. Seven additional types of bituminous coal—five from Alabama and one each from Kentucky and Virginia—were added to the Bureau of Mines' scientific analysis catalogue last year. Special coking tests also were added for certain high-sulphur and high-ash coals found in Maryland and Alabama. These tests added an estimated reserve of 500-million tons of Maryland and 14-million tons of Alabama coals to types which may be used, with suitable special preparation, for standard metallurgical coking operations.

Tobacco Trends. Few industries must adjust to such sweeping changes in consumer habits as have confronted U. S. tobacco manufacturers during the last thirty years. A current economic survey of the industry by the Treasury (as part of its tax revision studies) discloses that the factory tailored cigarette has made heavy inroads on all other forms of tobacco consumption.

In 1946 about 77 per cent of all U. S. tobacco moved to market in the form of cigarettes, as against less than 10 per cent in 1915. Per capita consumption has expanded from 178 cigarettes a year in 1915 to 2,324 in 1946.

"Consumption of cigarettes has expanded more rapidly than income or population."

Both cigars and processed tobacco have given way before the march of factory made cigarettes. As recently as 1925, one-fifth of all tobacco consumption was in cigars. By 1946 cigars took only 10 per cent of our tobacco marketings.

Prepared pipe tobaccos took exactly half the crop in 1920, but only 13 per cent in 1946. Cigarettes took 640-million pounds of leaf in 1920, an even billion pounds in 1941, and 1.5-billions in 1947.

"The outlook for cigarette consumption seems favorable. Production in 1946 reached about 350-billion cigarettes, or nearly double the 1939 total, and increased in 1947. As in World War I, it appears that the increase experienced in this war will be sustained."

All our cigarettes come from 62 factories—most of them in the South.

Higher leaf prices under the government price support program have tended to eliminate the so-called "economy" brands, or ten-centers. Profits of the standard brand cigarette producers have been squeezed steadily by advancing leaf prices. Net after taxes for seven principal tobacco companies declined from 14.1 per cent of net worth in 1936 to an average of 11 per cent for the last five years.

The number of cigar factories in the U. S. has declined steadily from 15,732 in 1915 to 2,441 in 1946. Plants processing smoking and chewing tobacco declined from 2,500 in 1915 to 394 in 1947.

Federal tobacco taxes now yield $1,237,000,000 a year in Treasury receipts—all but $90-millions of it coming from the cigarette tax of $3.50 per thousand.

Proposals before Congress to establish a differential tax rate for the so called "economy" brands at $1.75 per thousand involve delicate administrative problems. Under the present fixed tax rates equal on all standard types, the "economy" brands sell at the factory only 1.76 cents per pack lower than the standard favorites. With the proposed tax differential the advantage over the standards would become 5.26 cents per pack.

The Treasury study offers no recommendation on the proposed differential tax.

New Pipe Line. Texas Eastern Transmission Corp., which took over the Big Inch and Little Inch pipelines last year, plans a $150-million development program to carry a new line to Philadelphia, New York and New England outlets.

The application filed last month with the Federal Power Commission contemplates a new 26-inch line extending 1,020 miles from Longview, Tex., to Wind Ridge, Pa., where it will tie in with the Big and Little Inch lines.

An additional 400 miles of 26-inch line will be extended southward in Texas to new sources of supply.

These new lines with about 300,000 horsepower of added compressor equipment along the way, will cost $152,131,000, and will deliver an additional 425-million cubic feet daily.

No distribution plans have been completed beyond Philadelphia.

The new facilities would bring Texas Eastern's capacity to 993-million cubic feet daily.

Texas Hoof-and-Mouth Scare. Livestock men along the Rio Grande are mobilizing for a national campaign to curb the dread hoof-and-mouth disease in Mexico, for which the U. S. Congress last year appropriated $71-millions. The American-supervised eradication campaign in Mexico has been only moderately successful, principally because the Mexican government would not permit instant slaughter of all infected animals.

A recent livestock convention in El Paso called for immediate vaccination of all exposed animals north of the present embargo line, which is still some 300 miles south of the border.

Robert J. Kleberg, owner of the famous King Ranch, was in Washington in March to lay the Texas plea before the Department of Agriculture.

"The disease can't be eradicated as long as infected animals are permitted to live," he said.

Mexico imported the plague from Brazil in 1946, through a shipment of 327 bulls. By the summer of 1947 the infection had spread to 500 miles of Texas. Now it is only 300 miles away.

Congressional inquiry had branded the American eradication campaign in Mexico a sorry failure. The effort was devoted principally to quarantine and vaccination, which cattle men say merely preserves a perpetual "seed bed of infection." On the fenceless Mexican ranges, the plague spreads like a grass fire.

Tennessee Gas. More natural gas for the Knoxville-Chattanooga area is assured by the March decision of the Federal Power Commission authorizing Tennessee Gas Transmission to expand its daily delivery capacity from 380-million to 600-million cubic feet.

Much of the increased supply will go to East Tennessee Natural Gas Co., serving many communities in the eastern half of the State.

The order specifies that regular domestic and industrial users supplied by Eastern Tennessee Natural Gas shall have priority over "interruptible" supply

(*Continued on page* 21)

Potomac Soundings — *by Lawrence Sullivan*

(*Continued from page* 18)

contracts served by the transmission corporation in Kentucky and West Virginia.

The interruptible contract is a new wrinkle in natural gas supply, covering volume users who may be cut off at seasons of peak demand.

Georgia Hardwood. Public offering of both preferred and common stock of the Georgia Hardwood Lumber Co. is contemplated in a registration statement filed with the Securities & Exchange Commission. The offering is to finance purchase of the Washington Veneer Co., controlling interest in which was acquired by Georgia Hardwood several months ago.

Approximately $3,505,000 is involved in the expansion and development program. Equitable Securities Corporation is manager of the public offering, which will be limited for the present to 69,500 shares of convertible cumulative preferred and 10,425 shares of common.

New products and an expanded selling organization will be financed from the additional working capital.

The Nation

Troublemakers. Why should an industrial plant employing 700 to 1,200 workers at steady jobs be kept in a state of constant tension and turmoil by a Communist cell of three or four party-liners?

Workmen at the Briggs Manufacturing Co., Detroit, were troubled by the question on March 10. A Committee of twenty-five was appointed by the shop steward to explore the problem.

About an hour later a typewritten notice appeared on the company bulletin board, without the knowledge or approval of the management. The notice read:

> "If the four men listed below are not out of the plant by noon they will be put out. We will not work with these men because they are Communists."
>
> "THE COMMITTEE"

All the men named denied they were active Communists.

During the lunch period the committee of twenty-five waited on the four men men. The charges were recited personally against each. In turn, each was told to "get out or be put out." They got their hats and coats and left. There was no disorder, no interruption of work, no lost time to the employees.

As one of the expelees was leaving the main gate he passed over a bundle of Communist leaflets to a plant guard, who promptly threw them into the refuse can.

Communism is likened by some to a torpid fly buzzing over a picnic lunch—one well-aimed swat and he's through.

Food Outlook. Most food surveys neglect the fact that the population of the world has increased 200,000,000 since our so-called "base period" of 1935-39. If all food crops in the world this year were equal to those of a decade ago, we would actually have an over-all food shortage of ten per cent, as measured by prewar standards of consumption and nutrition.

With that basic fact in mind, the Department of Agriculture reports the 1948 world harvest outlook as the best since 1940. Growing weather has been uniformly favorable throughout the entire Northern Hemisphere; acreage has been expanded in every basic food crop throughout Europe; fertilizers have been much more available in both America and Europe.

If these bright promises are realized fully next summer, per capita food supplies for the whole world will be only fractionally below the prewar norm. In short, one more general increase of ten per cent in total food production would end all shortages in 1949.

Aid to Russia? Congressman Henderson Lanham, of Georgia, demands that Russian orders for official transcripts of U. S. patents be rejected. Soviet trade groups recently ordered transcripts on 480 patents, available to all comers at the fixed price of 25 cents each.

"It seems illogical and absurd, when all the world stands in fear of the perfection of the atom bomb by Russia, to permit them to have access to our patents and inventions."

Sale of U. S. patent information to foreign powers was inaugurated when Henry A. Wallace was Secretary of Commerce, the Cabinet officer in charge of the Patent Office.

Congressman Lanham explained to the House that his protest was based on material sent him by Daniel L. McWhorter, of Summerville, Ga.

Highway Costs. Total highway construction throughout the U. S. in 1947 was $1,154,000,000, says a report from the Federal Works Agency, but when the work is measured in 1939 dollars, the physical volume of new roads put in place was 31 per cent less than the annual average for the years 1925-41 inclusive.

Translated into equivalent dollars, the $1,154,000,000 spent last year for new highways represented the same volume of placement as would have be obtained for only $597,000,000 in 1939.

"The physical volume of highway work done in 1947 (an increase of 63 per cent over '46) was actually less than recorded in any of the seventeen years prior to the war, except 1935."

In round numbers, it takes 82 nowadays to do what 81 would do in road construction in 1939.

European Aid. Congressman George B. Schwabe, of Oklahoma, insists U. S. taxpayers have no real comprehension how much $6 billion is—the first appropriation requested for the Marshall Plan.

"That amount exceeds the capital value of twelve of the greatest industrial corporations of the U. S. It is more than the combined total assets of Sears Roebuck, Ford Motor Co., General Electric, Chrysler Corp., Reynolds Tobacco, Armour & Co., F. W. Woolworth Co., Eastman Kodak Co., Atlantic Refining Co., Aluminum Company of America, Goodyear Tire & Rubber Co., Republic Steel, and International Harvester Co."

The Tulsa Congressman asks if the Nation would vote to give away all these corporations between now and June 30, 1949?

"Then, what about $17-billions?"

Atomic Tracers. Scientific research in medicine and nutrition is approaching the other-world phase in the Oakridge Tennessee project of the Atomic Energy Commission. Atomic Commissioner W. W. Waymack recently related before the Science Clubs of America how radioactive tracer substances enabled photographers to follow plant growth and animal nutrition through the various organs.

"The problem was to find out what became of certain organic phosphorous compounds taken in by an animal in its vegetable diet. A radio-active phosphate was prepared in the chemistry laboratory. This was supplied to growing corn, as part of its fertilizer requirement. Geiger counters showed that a good deal of it went to the grain and was stored there. The grain then was fed to test animals, and again traced through their bodies."

But atomic industrial power is at least 25 years away, Waymack estimates.

British Imports. Commerce Department announces that Britain has renewed her Token Import Plan for calendar year 1948. This permits U. S. exporters to ship as much as 20 per cent of their prewar tonnage to UK ports. Certificates for export must be approved by Office of International Trade, Department of Commerce, Washington.

WASHINGTON BUSINESS BRIEFS

Virginia was the 27th State (March 15) to make bonds of the International Bank for Reconstruction and Development eligible investments for life insurance reserves . . . U. S. meat consumption in '48 is estimated by Agriculture at 145 pounds per capita, against 154 pounds in '47, the all-time record high . . . Senate will not act this year on Rizley Bill to relax control of Federal Power Commission over natural gas industry . . . O. K. La Roque, new appointee to the Federal Home Loan Bank Board, comes up from a brilliant career as president of the Home Loan Bank of Winston-Salem . . . After 32 years with the famous Munson last, the Army is changing its shoe designs, on the basis of 108,000 Medical Corps foot measurements from World War II . . . San Francisco is our third U. S. port to add an international trade zone; N. Y. (1937) and New Orleans (1947) . . . Official Washington has about forgotten its January-February frenzy for deflation.

Painted for U. S. Pipe & Foundry Co. by Paul Laune

U.S. cast iron PIPE

FOR WATER, GAS, SEWERAGE AND INDUSTRIAL SERVICE

THE quality of U. S. Cast Iron Pipe is controlled to a degree undreamed of by pipe founders a generation ago. Before the molten metal is poured into the mold of a Super-deLavaud centrifugal casting machine the important characteristics of the iron have been determined by our metallurgists. After the pipe has been cast our plant and research laboratories conduct numerous tests, in addition to acceptance tests, to assure the maintenance of quality in U. S. Pipe. This routine procedure at our several plants is enforced so that *we* may be confident that *your* confidence in our product continues to be justified. **United States Pipe and Foundry Co., General Offices: Burlington, New Jersey, Plants and Sales Offices Throughout U. S. A.**

Investment Market Trends

By
Robert S. Byfield
Financial Editor

SELDOM in even the tumultuous years of the last decade has the American investor been subjected to so many conflicting cross-currents as at the present time. Since the third week in October, when the call for the special session of Congress was made, the uncertainty as to the legislative program of the Federal Government has been chilling to the spirit. It has been difficult to plot a course which would assign proper weight either to expected higher commodity prices or to lower prices, to inflation or deflation, to hardening money rates and tighter credit or to a reversal thereof, to the possibility of lower taxes and to the repercussions of a rearmament program. These have been matters of concern not only to the holders of common stock equities but to the owners of Government, municipal and corporate bonds, or the prospective purchasers thereof.

Contracting Economy

One trend, however, is becoming increasingly apparent; namely, that we are in a contracting economy. It is quite possible that the May 1946 peak of 212.50 in the Dow-Jones Industrial Average will prove to have been the high for the immediate post-war stock market, and that 1947 will be recorded as the year of greatest post-war activity because of the existence of the replenishment boom. At this writing the customary financial and economic indices such as the Federal Reserve Board index of production, railroad car loadings, electric power output, employment and construction activity certainly do not indicate that we are headed for a depression or even a much less milder form of recession. Nevertheless, there is evidence that some of the industries which were highly stimulated by the war are feeling the effects of a return to more normal conditions. Examples of these are brewing, distilling, automobile tires, amusements, railroad passenger traffic, a considerable number of luxury groups, small household appliances, radios, shoes, jewelry and certain miscellaneous retail establishments. The recent readjustment in the prices of farm products and foods now seems to have been healthy for the economy as a whole. Aside from the relatively minor effect upon holders of large inventories in this field, many of whom were wholly or partly protected by LIFO accounting, the decline in quotations for foodstuffs has been beneficial because it served to correct an existing maladjustment rather than to create a new one. The unusually severe Winter in many parts of the country accentuated whatever downward trends had developed in the consumer goods field because of the filling of pipelines of supplies and somewhat more cautiousness on the part of consumers.

Continued prosperity in the capital goods and automobile industries seem to insure that whatever decline in business will take place will not be too drastic. The demand for steel shows no let-up, and the long expected softening in copper prices has not only failed to develop but the primary supply of this important metal is probably as tight just now as it has been at any time in the recent past. The manufacturers of heavy electrical equipment expect to be busy for many years to supply the products for the $6,-000,000,000 construction program of the utilities. Railroad earnings should be very satisfactory in 1948 and since their working capital is very large they should be able to continue their ambitious program of replacing old equipment with new and to continue to keep trackage and rights of way up to a high standard of efficiency.

About the Author—

In this issue, Robert S. Byfield, member of the New York Stock Exchange and associate member of the New York Curb Exchange, begins a monthly column devoted to the general financial and securities situation. A Cornell graduate, Mr. Byfield, following service in World War I, was attached to the staff of Herbert Hoover, being associated with the relief missions to Austria and Czechoslovakia in 1919. He has been associated with numerous investment banking firms in New York during the last 27 years including: Ames, Emerich and Co., Inc., as vice president and director until 1931, and as a partner of Lewisohn and Co. from 1945 to 1947. In the interim, he formed Byfield and Co. in 1935, and headed this organization until its dissolution in 1945. Presently the author is giving his attention principally to securities analysis and portfolio management. He has written extensively for financial publications such as Barron's, Wall Street Journal, Investment Dealers Digest, and the Commercial and Financial Chronicle.

It is not possible to be very definite about the immediate future of the securities markets because they will be acutely affected by the course of events in Europe, and particularly by the actions of a handful of men in the Kremlin. On the other hand, these same events will be to some extent conditioned by the actions, courage and astuteness of the Federal Government in Washington. All that can be said now is that the chances have improved for Universal Military Training and possibly a return of some aspects of Selective Service. There is little doubt but what large orders for new aircraft and accessories will be placed in the not too distant future. There will be a heightening of activity in the radio and electronic fields. There may be some naval shipbuilding in the cards and certainly we may presume that our existing merchant marine and naval vessels will be kept in good repair. It is doubtful whether enough of a rearmament program can be gotten under way in the ensuing six months to reverse whatever deflationary tendencies exist, but it will probably be enough to reverse or hold at a minimum any tendencies towards greater unemployment.

Securities Lower

The securities markets have had comparatively little contact with the realities of the business situation for almost two years. Industrial common stocks are once more at the low levels reached successively on October 19, 1946, November 22, 1946, May 17, 1947 and February 10, 1948. On the other hand, railroad shares reached their post-war low on May 19, 1947 and quotations are still about 15% higher than they were at that time. Yields based on current dividends are extremely high both in actual dollars and in relationship to the yield from high grade bonds. In fact, the "spread" or difference in the yield from bonds and stocks is unusually great. Borrowings on common stock collateral are low and in point of volume are comparable to the figures reached in the Spring of 1942 when the securities markets were far more depressed than they are now, and when the victory over the Axis was only a fond hope.

Stocks Compared

There are various yardsticks by which the level of common stocks may be measured in relation to the high quotations of May 1946, but they are roughly 30% lower today than they were then. This is a sizable drop and, historically speaking, would serve to discount a business recession which has, of course, not yet materialized. In fact, the indices show that we are more prosperous now than we were when stocks were at the peak. Furthermore, common stocks are on the whole selling only 15% higher than they were in the 1935-1939 period which is about the only fair base that can be used. With the exception of about 14 months of that period when we enjoyed a short-lived boom, the remaining 46 months were fairly mediocre with serious political pressure on business and frightening events abroad. American industrial corporations were paying out more than they earned and for the first time in our industrial history there was no accumulation of capital. On the other hand, corporate and personal income taxes were lower in the 1935-1939 period than they are now and money rates

(*Continued on page 64*)

THE Farmer TAKES A Pipe

AND CHANGES THE FACE OF RURAL AMERICA

Green pastures instead of scorched earth . . . crops whose yield is greater than ever before . . . citrus groves heavy with juicy fruit that couldn't wait for rain . . . how can a *pipe* make so much difference?

It can, because it's *aluminum*. Because it's aluminum, irrigation pipe can be part of a *portable* sprinkling system. Light, easily moved, aluminum irrigation pipe delivers life-giving water wherever the farmer wants it, whenever he needs it. He couldn't afford to have his entire property piped with permanent, heavy-metal water lines. He *can* afford a system big enough to do part of it at a time, light enough to move easily, all over his land.

Thus Alcoa Aluminum Pipe, finish-fabricated by the irrigation system supplier, is helping create a new industry, helping make America more productive. Think what this pipe—available in a wide range of sizes, alloys and wall thicknesses—might do for your industry. Light . . . corrosion-resistant . . . strong . . . easy to fabricate . . .

The change from heavy metal to Alcoa Aluminum may make your product easier to handle, give it new long life, add unbeatable sales appeal. Consult nearest Alcoa sales office, or write ALUMINUM COMPANY OF AMERICA, 2109 Gulf Bldg., Pittsburgh 19, Pa.

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60 YEARS OF SERVICE

FIRST IN ALUMINUM

THIS POLICY HELPS ALL AMERICA PRODUCE!

Alcoa makes just the pipe, for other manufacturers to fabricate into complete systems. That basic Alcoa policy—making aluminum—and letting others make the finished aluminum products—adds up to more business enterprises, more jobs and more and better things of aluminum.

LITTLE GRAINS OF SAND

"Little drops of water, little grains of sand,
Make the mighty ocean, and the pleasant land."

Danger Signal. Higher prices have greatly increased the amount of money required to finance business expansion in productive capacity, and they have compelled business to invest vast additional sums in inventory and in receivables, cutting down the sums left for the purchase of new fixed assets. There is a rather sound economic theory that business depressions develop because business must tie up more and more capital in inventory and receivables during a boom, so that the ability to purchase capital goods becomes impaired. Current prosperity is certainly being threatened in this way. Only a leveling of prices can abate the danger and prolong the current era of good business.

As Ye Sow. Indisputable facts have now come to light to prove that at the historical conferences at Teheran and Yalta the late President Roosevelt insisted on putting Prime Minister Churchill in his place by working out strictly Russo-American strategic plans. These called for invasion of the Continent from the west instead of through the Balkans, and for turning one-half of Europe over to the Soviets, with the unhappy results we now see and must take positive action to checkmate.

Honest Money. There finally are some healthy indications that people, and nations, are getting tired of phony money and phony money manipulators. Perhaps this trend toward fiscal sanity abroad will lead us back eventually to a gold-coin standard of money —the best system devised over 5,000 years and one which gives the people direct control of fiscal policies of their government. France has moved to put the franc on an honest basis, just as Italy previously cut out pretending about the lira. The actions of these nations should be sobering to our own planners and currency managers.

Red Spectre. It is a fatal fact and one that free people must not for one minute forget that a communist party may lose a score of elections in a free country and continue its activities. But if communists get a majority, or even a large minority, in just one election, liberty can be saved, if at all, only by civil war. It is not necessary for the communists to fool all the people all the time. If they fool enough of them at a strategic moment their police and propaganda machine can be counted on to steamroller any future opposition.

Everyone should realize that there is such a thing as the high cost of living for corporations and their shareholders as well as for themselves.

Santa Claus. American charity has gone collectivist. We turn to government for our hospitals and medical care, for our education, for our relief for the needy and unfortunate. This process of collectivizing charity has two causes. The first and most important is the weight of present-day taxation, especially that in the middle and higher income brackets. Another is the ambition of governments, federal and local, to take over responsibilities which used to rest on the individual. The means to discharge these responsibilities, of course, governments must take from the citizens who would otherwise have the desire and the means to contribute voluntarily. This inverse ratio of gifts to charity and taxes has gone right on despite the fact that the income tax law is supposed to encourage charitable contributions by making them deductible before paying the tax.

Ah, Economy! The administrator of Veterans Affairs has announced that Veterans Administration will reduce its personnel by approximately 8,500 employes before the end of the current fiscal year, June 30, 1948. By making personnel adjustments at this time, VA is moving to stabilize its staff before the beginning of the next fiscal year. The planned reductions are to be made in services other than medical. In VA's recommended budget for the fiscal year 1949, an increase is proposed in the medical program.

One Step More. T V A proposes to begin construction of a steam plant on the shores of Kentucky Lake, at New Johnsonville, Tenn. The total cost is set at $54,000,000. It seems that now there is need for more power than all the dams in the TVA system will produce and the Authority is doing exactly what any other business organization alert to the possibilities of new business would do. It is getting ready to invest fifty-four million dollars to meet the demand. The only difference is that the money to be invested comes from the taxpayers of the country and that the investment of this tremendous new sum of money injects the United States government that much further into state socialism.

More Slums? Negroes have been moving out of the South during the last seven years at a greater rate than during the preceding forty years. It has been estimated that approximately three million Negroes have moved out of the South since 1940.

(*Continued on page* 26)

Industry after industry has found in the Southeast an answer to its expansion or relocation problems. Here labor supply, raw materials, climate, plentiful power and transportation offer an unbeatable combination of advantages to progressive manufacturers and distributors.

Along the lines of the Seaboard Air Line Railroad are many potential plant locations, among them one or more which can meet your exact needs, your own specifications.

Ask Seaboard for the facts—in the form of a survey of plant sites particularly adaptable to your requirements. These facts are the kind that "add up" logically to a maximum total of opportunity for new or expanding industries.

Your inquiry will be held in strict confidence. Please address:

Dallas T. Daily, General Industrial Agent
Seaboard Air Line Railroad Company, Norfolk 10, Va.

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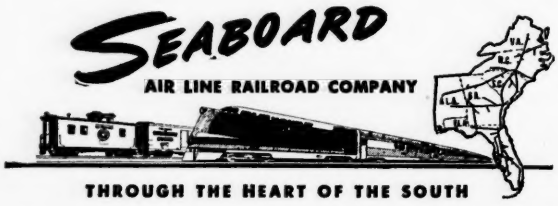

THROUGH THE HEART OF THE SOUTH

LITTLE GRAINS OF SAND

(*Continued from page* 25)

This means that 30% of the South's 1940 Negro population has moved away to other localities. It also means that the South now contains only about 60% of the nation's total Negro population, compared with 77% in 1940. This is a larger drop percentagewise than occurred during the preceding forty years. The South contained 90% of the Negro population in 1900 and showed a drop of thirteen percentage points between 1900 and 1940, compared with a drop of seventeen points between 1940 and 1947. The South's race problem seems to be spreading to the northern cities. How are they solving it?

Constitutional Rights. As we consider the history of our nation, we can hardly escape the conclusion that its progress has been due to one main fact—that here for the first time in the history of nations was founded a government that belonged to the people rather than a people who belonged to their government. Here for the first time the individual had an opportunity, in fact was guaranteed an opportunity, to do something for himself, to create, to accumulate, to save, to provide for the future welfare of himself and his family. Our whole government was based on the philosophy that this opportunity could not be taken from the individual, by the government or by anyone else.

That is why any measure (proposed legislation) that is presented to us must be judged by whether or not it deprives the individual of his freedom. If it does, it is bad, regardless of the arguments in its favor. As an illustration, for instance, that is the fundamental factor in the matter of the closed shop. If freedom means anything at all, it means a man has the right to join a union if he wants to, but it also means he can not be forced to join a union before he can go out and make a living for himself and his family. The same principle applies to the right to strike. A man has the right to quit work if he wants to, but in the process of doing so, he has no right whatsoever to keep someone else from working. These are not questions of rights as between labor and management; they are fundamental to the rights guaranteed the individual citizen of this nation when our government was established.

Thurman Sensing.

Degeneration. We have been living under a new social and political philosophy for fifteen years. This has been accepted by the majority of our young and middle-aged people, as they have had no personal experience with any other. Even some so-called business men and politicians have been converted to the belief that the people should work less and less for more and more money, that when no work is available the government will take care of them through unemployment compensation, and when they get too old to work the government will again provide a live-

(*Continued on page* 28)

LONG VISTAS

Cotton Mill Building, Johnson, S. C.

and a slightly tilted roof

A casual glance at this building shows only the length of the rows of uprights in perspective.

But, take a closer look. Note that the left end of the roof is higher than the central portion and that it slopes down again at the right. This was no accident. The architect planned it so.

Accurate Fabrication

And what the architect plans, we can deliver. The knowledge that specifications will be followed exactly, that all fabrication will be accurate—those give the architect a feeling of confidence and of freedom in drawing plans for each specific purpose.

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SELF-ALIGNING, BALL BEARING

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HAVE THESE

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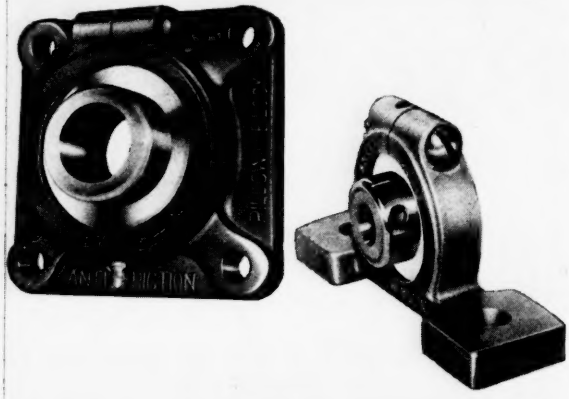

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★ **ADAPTER BUSHINGS**—lock to shaft with two set screws, making each basic pillow block accommodate several different sized shaft diameters.

★ **RANGE OF SIZE AND STYLES**—adaptable for any industrial use for both Normal and Heavy Duty.

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LITTLE GRAINS OF SAND

(*Continued from page* 26)

lihood. They do not seem to realize that the only way the government can do this is to take the wealth away from someone who has it, or run the printing presses. They have been doing both.

New Homes. Official information now available indicates that in 1947 homes were built almost in exact proportion for families in all income groups, except those with incomes of less than $1,000 and those in the highest income brackets. Instead of building entirely for the upper income groups, private enterprise has built homes within the reach of at least 75 percent of the nation's families. Moreover, official figures reveal that the family of average income was able to afford the average price of homes built in 1947, without overreaching itself.

Enlightened Self-interest. If we are to solve the inflation problem, we must first of all deal with the excessive supply of money in our banking system. It is useless to try to control prices through rationing, or through increased production, when the creation of money in the form of bank credit goes on uncontrolled. It is clear that public officials dependent on the voters will not take the initiative for an unpopular action. But inflation can be restrained at its primary source when our citizens, motivated by self-interest and recognition of the need for preserving the economic strength of our nation, make their wishes known to those who represent them in Congress.

Third Round? Even before there was any hint of the break in commodity markets and cost-of-living prices, a Gallup Poll disclosed that 53% of the public already knew that another round of wage increases would be harmful. Of the union members questioned in this poll, 39% expressed themselves as being against another general wage increase and 16% were undecided. With prices coming down and scarce goods becoming more plentiful, there is every reason to believe further inflationary wage increases—with no more production—are now opposed by an even greater majority of the public and probably even by a majority of union members.

The Georgia Story

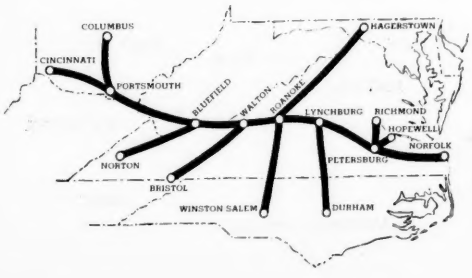
The May issue of the RECORD will feature the state of Georgia. Supplementing the regular monthly features will be approximately 50 pages devoted to The Cracker State, covering her industries, resources, history, financial position, agriculture, educational facilities, transportation, recreational areas and all other particulars that, in combination, make Georgia the great state that she is today, and which augur so positively for her future.

No effort has been spared to make this issue outstanding in every respect. We believe that you will find it informative and interesting, whether you be from Georgia or from any other state in the union.

Some shipping problems call for extraordinary measures. It's not likely that you'll want to ship a giraffe — but even that may seem simple compared with some of the actual problems which come to your desk.

No matter what your shipping problem is, the Norfolk and Western can help you solve it profitably.

N. & W. *Precision Transportation* serves the vast, rich territory between the year 'round, ice-free Port of Norfolk and the midwest, and between the North and the South — with fast daily schedules and connections to the four points of the compass. Call in a Norfolk and Western freight representative. These men, located in principal cities throughout the United States, know shippers' problems and know what a good railroad can do. They can help you toward a quick and profitable solution of your particular problem — without obligation. Call on them — they are as near as your telephone.



Norfolk and Western RAILWAY

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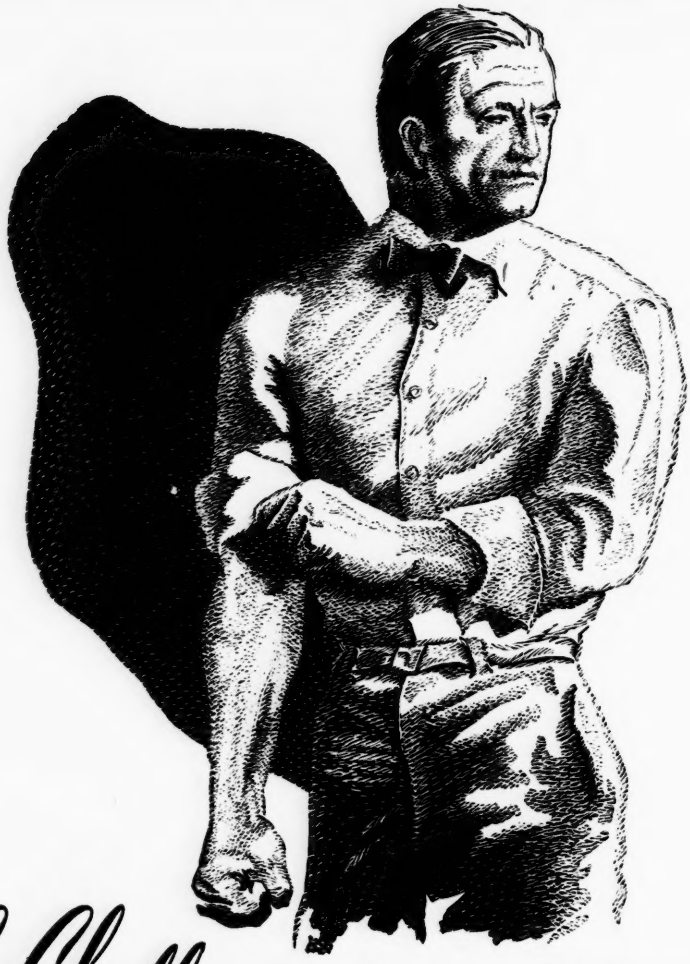

A Challenge to real Americans

WHY is it necessary to sell America to Americans? One of the reasons is, not until now did the people of this country have to be shown that they lived in the most favored and most favorable country on earth. Where are the salesmen to do this job? Every community has its leaders who have this responsibility, not only to themselves, but to their families, their community and their country

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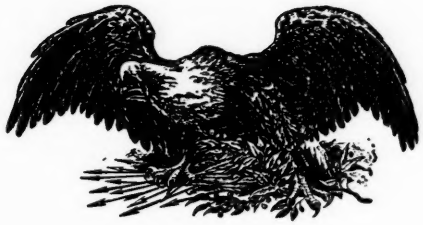


"What Enriches the South Enriches the Nation"

Benevolent Socialsm

EVERY literate American knows that constitutional democracy such as ours means freedom for each individual under equitable laws and that one of these freedoms is the right to select the government. In short democracy means that the citizens are masters of their government.

Americans also know that socialism (admittedly the most benign of all the "isms") means that the citizen, after surrendering his natural and constitutional freedoms, has become a slave to his master, the state.

Of course proponents of socialism try to paint the picture of the ideal state as an Utopia of equality, abundance and security and they might be able to make their mirage alluring were it not for the fact that there are, in the United States today, more than 20 million grown men, and more than a few women, who have spent some of the years of their lives living under the most benevolent form of Socialism the world has ever known. We refer to those millions who have served, at one time or other in whatever capacity, in the armed forces of the nation.

When a man enlists or accepts a commission in any branch of military service he surrenders his freedom of action and expression, even his chances for life or death, to the military machine which he acknowledges, by oath, to be his temporary master.

This man, once "in," no matter what his rank may be, is a servant to the machine that can use him, his life as well as his talents, as it directs. The mere word SERVICES, as it is used in connection with the word MILITARY in describing the armed forces, is aptly descriptive.

This soldier or sailor or marine receives the ultimate in personal security in the sense of that much overrated word used by New Deal demagogues. He, as an enlisted man, is fed and clothed, housed and doctored, but he also eats what is prepared for him, wears a uniform (please note the connotation of that word), lives where he is ordered to live and swallows castor oil for a broken leg if his Med. orders him to do so.

Military life can be, and for many people is, as many of us know, a carefree life, but it is a restricted life from which the benevolent military machine grants its servants certain periods of freedom (passes, leaves, furloughs, etc.) when they can return to normal free society for a brief time. How many of the servants of the military organisms refuse such freedoms? And in this connection we should remember that there is not even temporary escape from a socialist state.

It is our sincere belief that every citizen, man or woman, should serve an allotted period in the military forces at a time in his or her life when personal character and social opinions are being formed. We believe in national military training not only as a bulwark for national defense but as an experience that will teach, by contrast, the value of the American way of life.

The South's Balance Sheet

By Caldwell R. Walker
Feature Editor

WITH industry producing at record levels, the South's financial balance sheet this month shows figures of impressive proportions. (See Cover.) Even the most pessimistic observer could safely conclude that the Southern industrial machine, despite moderate decline in scattered instances, is outstripping the high levels of production reached during 1946 and 1947.

The picture is decisive. In the latest month, value of all manufacturing amounted to $3,108,188,000 as against $2,564,064,000 in the corresponding month of 1947. The 254 new plants and expansions during the month were 12 units greater than the number of expansions during the same month last year, while construction awards totaled $256,999,000, an increase of $166,622,000 over the previous 1947 month.

In short, as manufacturing value soared, the region's income increased likewise. For the South, this carries a special emphasis. A swelling income means more capital available for further—and greatly needed—industrial expansion. In the South's drive towards a balanced economy, no factor has been more singularly important than this significant increase in overall income.

In 1946, South, Inc., that great unregistered business, with its 16 sovereign components, turned in a gross income, before federal taxes, of $42.5 billion. Compared with the prewar year of 1940, this return represents a gain of 145 per cent over the $17.3 billion of the earlier year.

Divided among the region's 47 million people, the income of 1946 amounted to $900 for every man, woman and child, or $3,600 for each family of four —a good bit above what might be termed a bare subsistence wage.

TABLE I

Manufacturing—1946—By Industry Groups

(16 Southern States)

Industry Group	No. of Plants	Production $ million
Autos	242	$ 319
Elec. Mach.	306	335
Furniture	1,728	772
Iron-Steel	1,334	1,363
Lumber	16,992	1,335
Machinery	1,759	598
Nonfer. Metal	822	483
Stone, etc.	2,323	669
Tran. Equip.	616	840
Misc. Mfg.	1,576	199
Durables	27,698	6,913
Apparel	2,813	1,076
Chemicals	2,534	1,866
Food	12,663	5,833
Leather	470	414
Paper	477	782
Pet.—Coal	410	1,778
Printing	5,965	690
Rubber	120	189
Textiles	1,984	2,959
Tobacco	296	1,685
Nondurables	27,732	17,272
All Mfg.	55,430	$24,185

$6.2 Billion From Manufacturing

On one side of the ledger was the effort expended by a labor force of nearly 18 million persons, and the depletion of a small part of an untold store of natural resources. On the other side of the ledger were Trade and Service incomes amounting to $10.6 billion; incomes from Municipal, State and Federal governments in the form of salaries, pensions and subsidies, $9.2 billion; Manufacturing payrolls, $6.2 billion; net receipts from Agriculture including wages and profits, $6 billion and miscellaneous property and payroll income encompassing all other business activities totaling $10.5 billion.

The sum listed as Manufacturing payrolls does not fully show the role that manufacturing plays in augmenting Southern wealth. Since the greater portion of the South's manufacturing is performed by corporations whose net earnings are distributable to individuals only in the form of dividends, that part of manufacturing's contribution to regional income is relegated to the item designated "miscellaneous property and payroll income."

While it is true that all corporate income originating in the South does not remain here, the greater portion does, and plays an important part in increasing the South's wealth. Analysis of this contribution affords an interesting study, and figures from the 1948 edition of *Blue Book of Southern Progress* present an accurate base from which such a study can be made.

Drawing from the second table of the *Blue Book's* Manufacturing Section, we find: *See table No. I.*

The totals of this table show that in 1946, the manufacturing plants of the South turned out products

Last month, feature editor Caldwell R. Walker showed that of the nation's total of $73 Billion invested in manufacturing corporations, partnerships, and individual operations, the South's share is more than $16 Billion, representing a growth of $10 Billion since 1919. Continuing his study this month, Mr. Walker finds that the increase in capital investment, and the accompanying widespread expansion of manufacturing plants and facilities, has paid off. In 1946, the sixteen Southern states achieved a gross income of $42.5 Billion from all sources, an increase of 145 per cent over 1940. To this total, manufacturing payrolls contributed $6.2 Billion, exclusive of an additional $1.5 Billion available for dividends or surplus and made possible by the sales of products manufactured in Southern plants.

valued at $24 billion. The profit from this operation to the South is reflected in increased income through dividends, expanded plant capacity and retained capital surplus.

By using operating reports of representative Southern firms and considering product value as sales value, the following table showing sales and profits for each of the major manufacturing industries in the South is derived: *See table No. II.*

The profit total in the table above is gross profit, after all costs of production and sales are defrayed, but before federal income taxes.

$1.5 Billion As Surplus

Figuring federal income taxes to have taken 40 per cent of the $2,488 million in gross earnings, there was still left to Southern manufacturing concerns $1.5 billion to distribute as dividends or to carry forward as surplus.

Even granting, however, that manufacturing is already contributing liberally to Southern wealth and standards of living, opportunity remains largely undiminished for additional expansion in this field. The South can still add materially to its manufacturing facilities without fear of bringing its economy into disbalance. This is amply exemplified by comparison of Southern and National types of income, as set forth in the following table:

Type of Income	*Southern*	*National*
Trade & Service	24.9%	26.6%
Misc. Income	24.7%	25.3%
Mfg. Payrolls	14.6%	21.3%
Payments from Gov't.	21.6%*	17.0%
Agr. Income	14.1%	9.8%
All Income	100. %	100. %

**Includes District of Columbia*

The real opportunity, one that should appeal to investors everywhere, lies in the vast field for expanding manufactures, made possible and potentially profitable by unlimited natural resources and a rapidly growing, free-buying population that is eager to raise its living standards by alsorbing at home the many commodities which manufacture produces.

By this same procedure of increasing productive facilities, the South will be able to attain even better balance than it now enjoys in the realms of trade and service, for these too will expand in response to the opportunity extended by development of additional manufacturing.

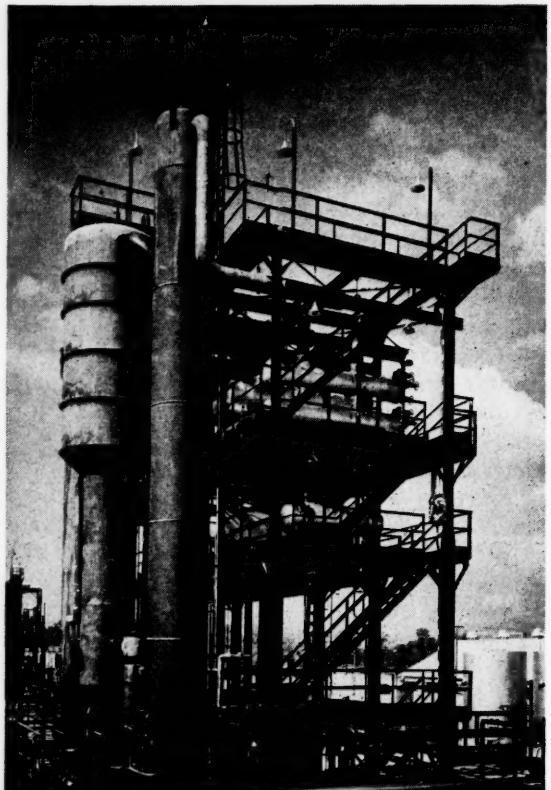
If the past few years may be taken as criteria, there seems little doubt but that this desirable transformation is taking place swiftly.

TABLE II

Manufacturing Sales and Profits

(16 Southern States)

Industry	Sales ($ million)	Profits ($ million)
Autos	$ 319	$ 28
Elec. Mach.	335	29
Furniture	772	67
Iron-Steel	1,363	147
Lumber	1,335	216
Machinery	598	65
Nonfer. Metal	483	52
Stone, etc.	669	77
Tran. Equip.	840	42
Misc. Mfg.	199	20
Durables	6,913	743
Apparel	1,076	98
Chemicals	1,866	241
Food	5,833	459
Leather	414	36
Paper	782	131
Pet.—Coal	1,778	199
Printing	690	82
Rubber	189	14
Textiles	2,959	364
Tobacco	1,685	121
Nondurables	17,272	1,745
All Mfg.	$24,185	$2,488



Above is the new finishing unit operating at the naval stores plant of the Newport Industries, Inc., Oakdale, La.

Risk Capital = Industrial Might

Despite a shaky commodities market, uncertain world conditions and continued cries from some economists that recession was sure to come, the concentric rings of Southern industrial expansion widened still further last month as the newest additions to the industrial scene swung into operation.

At Oakdale, La., a new finishing unit at the naval stores plant of the Newport Industries, Inc., was contributing its share to the growth of that industry in Louisiana.

In the Piedmont area, at Greensboro, N. C., the new folding plant of the Container Corporation of America had begun operations, producing folding paperboard cartons for the tobacco, textile, food and other industries which center around that part of the South. Shipped flat the cartons will range in size from cough-drop boxes to those large enough for blankets.

Employment of the plant, which now numbers about 80 persons, is expected to double within a year. Of modern design, the building encloses 110,000 square feet of floor space. To facilitate the handling

TEXAS CITY

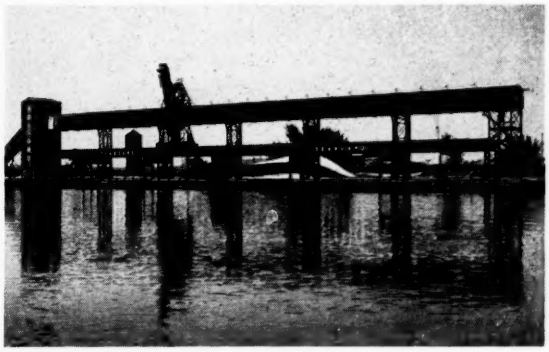
On the morning of April 16, 1947, minutes after a French ship loaded with ammonium nitrate exploded, the waterfront at Texas City, Tex., billowed up in flames and black, poisonous smoke. In the disaster, the huge $10,000,000 plant of the Monsanto Chemicals Co. was completely destroyed. For what had taken place a few months later, see picture at right.

Hedrich-Blessing

With employment of 80 persons expected to double within a year the new folding plant of the Container Corporation of America at Greensboro, N. C. is supplying industries in that area with paperboard cartons of all types.

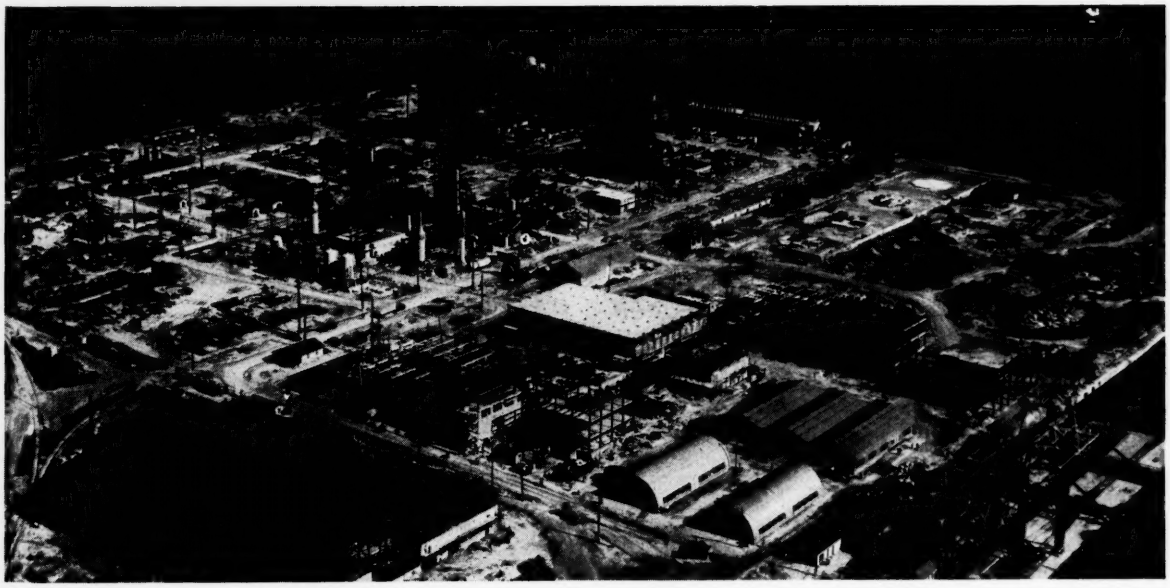
of materials, spur railroad tracks have been laid right into the plant so that all loading and unloading of freight is done within the building, protecting both personnel and materials from exposure to inclement weather.

Further South, at the growing port of Tampa, Fla., the Seaboard Railroad Co., announced that the world's largest and most modern phosphate elevator had been put into use on Seddon Island. The installation is used to complete delivery of phosphate rock to ships. In operation, ships anchor alongside the dock and phosphate is deposited through ship's hatches by means of a moving tower and chute which operates along a 450-foot belt. Approximately 1,500 long tons of rock per hour can be loaded by this means.



Seaboard Railroad's phosphate elevator at Seddon Island, Tampa, Fla., cost $700,000. It is the world's largest.

COMES BACK



Risen literally from the ashes of its ill-fated predecessor, the new Monsanto plant reveals little evidence of the Texas City explosion. For many, the notable comeback of Monsanto there, brought to mind the pledge of company president William R. Rands, who upon surveying the destruction, had said that a bigger, better plant would be built.

FNPS

Installation, above, at Sarasota, Fla., is typical of the steam electric generating plants being erected as part of the Florida Power and Light Co.'s $85,000,000 construction program.

South's Wide Expansion of Power Facilities to Add 1,000,000 Kilowatts to 1948 Production

By
Samuel A. Lauver
News Editor

THE South is sharing substantially in the multi-million dollar power expansion of the country, with estimates placing the number of kilowatts to be added this year to systems below the Mason and Dixon line around one million, with several other millions scheduled for installation during the following two years.

Expenditures for the entire country during the years up to 1951 are set at $6,000,000,000. This will mean that about 15,000,000 kilowatts of generating capacity will be added, or 5,000,000 kilowatts more than the total in all government-owned plants in the country. Several of these latter, particularly those of the Tennessee Valley Authority, are located in the southern area.

Long planned construction programs delayed by slow deliveries due to war conditions moved toward full speed in the last half of 1947. It is reported by some companies that equipment for installations have been on order for seven years. Construction expenditures this year are tabulated at about $1,750,000,000, or about $350,000,000 more than in 1947. These figures include both generating stations and transmission and distribution facilities.

Southern Plans

Southern expendtures range from $88,000,000 and $85,000,000 programs over a half decade to $4,500,000 projects covering additions to existing plants and new electric generating stations, with such intermediate figures as $59,500,000 and $50,000,000 for electric construction in the widely separated areas served by southern utilities.

The $88,000,000 program is that of the Arkansas Power & Light Co. which will spend this large sum for expansion and improvements under a plan scheduled to run through 1952. Planned to meet rapidly expanding power needs that by 1952 are expected to reach 430,000 kilowatts, the program includes $10,000,000 for completion of the unfinished Lake Catherine steam electric station. The company is now making surveys to determine possible locations of two 60,000-kilowatt plants, cost of which is placed around $12,000,000. The five-year program will also include an expenditure of $29,000,000 for distribution facilities.

Over a five-year period, the directors of Florida Power & Light Co. have plotted an expansion program tentatively set at $85,000,000. Total capability of this company's generating plants in 1945 amounted to 210,000 kilowatts. Expansion since then includes new generating equipment installed, ordered or authorized and approved, to increase that capability to 426,000 kilowatts, or to more than double the previous level.

Florida Power & Light additions 1946-1949 consist of: New Sarasota plant, 18,000 kilowatts in 1946; New Riviera plant, 50,000 kilowatts in 1946; Sanford extension, 18,000 kilowatts in 1947; Miami extension, 44,000 kilowatts in 1947. Three plants of locations yet to be determined will total 86,000 kilowatts. Another 44,000-kilowatt generator, together with boilers and related equipment have been ordered for 1950.

Florida Power Corp., St. Petersburg, Fla., placed its 25,000-kilowatt turbo-generator with its 325,000-pounds per hour boiler in operation at its Inglis station. A similar unit was also put in commercial operation at the George E. Turner plant, the Inglis project including General Electric turbine, the Turner

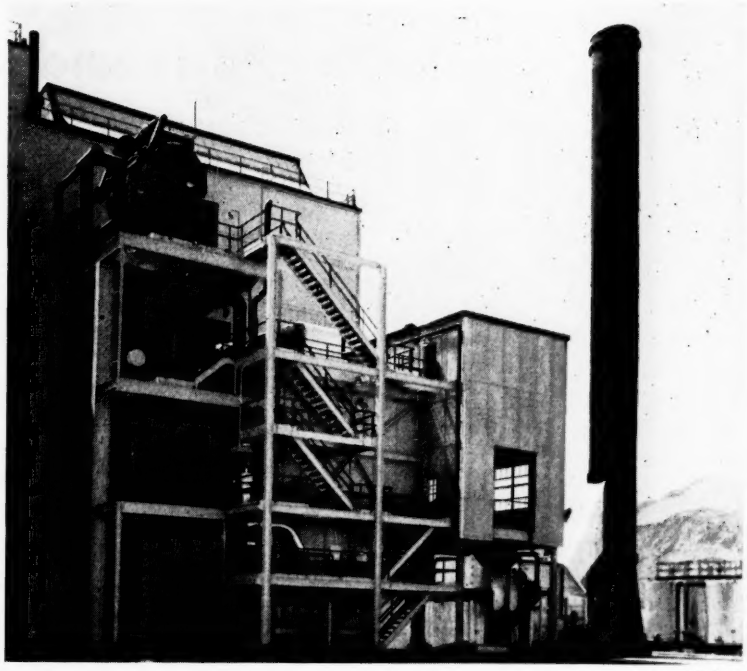
unit, a Westinghouse turbine. Future plans call for a duplicate unit to go into service late in 1950, details not yet determined. Considerable transmission rehabilitation and general changing of transmission voltage levels from 66,000 volts to 110,000 volts is in progress and will continue through 1949.

Georgia Power Co. this year will finish the first 22,500-kilowatt unit of a 45,000-kilowatt steam-electric generating plant near Albany, Ga. A fourth unit with the necessary transmission lines and substations, this one of 60,000 kilowatts capacity, will be added to Plant Atkinson and a 40,000-kilowatt unit at Plant Arkwright. Construction is scheduled to start this year on a steam-electric plant near Atlanta, which with the others is part of a $59,500,000 construction program slated for completion in 1949. The company sold $10,000,000 mortgage bonds early in December. Net proceeds are being used to pay notes totaling $2,500,000 and to finance expansion.

Carolinas Program

Construction plans of the Appalachian Electric Power Co. call for expenditures of $54,000,000 by the end of 1949 with the possibility that the figure will be increased to $64,850,000. With the Ohio Power Co., this utility has a project for a new electric generating unit to be known as the Philip Sporn station in Mason County, West Virginia. Estimated cost of the station with appurtenant equipment is $17,800,000.

Houston Lighting and Power Co. completed the first step in a $20,000,000 expansion program when its new $2,500,000, forty thousand-kilowatt West Junction unit was placed in operation. This raised the generating capacity at that plant to 80,000 kilowatts. Design is such that future expansion is possible. An additional 60,000-kilowatt turbine is on order. A $12,500,000 generating plant is now under construction on Greens Bayou, with completion scheduled for 1949. Capacity of the project will be 132,000 kilowatts.



Gerlach

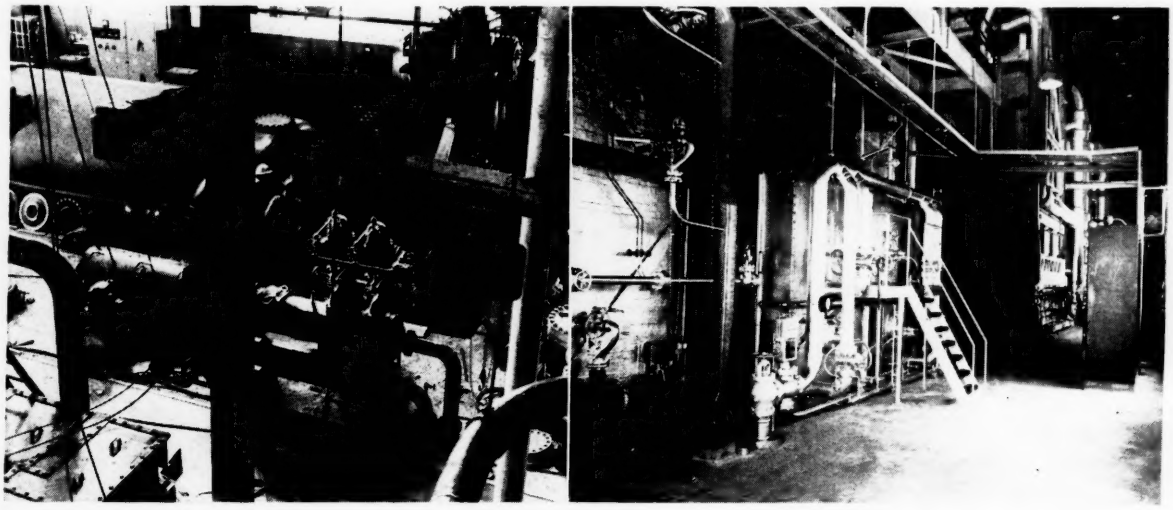
Above is part of the plant of the El Paso Electric Co. which in the next two years will spend $4,800,000 for expansion and improvements of facilities.

Dallas Power & Light Co., Dallas, will complete its $5,000,000 Mountain Creek station by 1949. This will be equipped with a 40,000-kilowatt, 3,600 r.p.m. turbine generator utilizing hydrogen cooling for the 13.8 kv. generator. A single 450,000 pound per hour boiler will probably be used to generate steam for turbine throttle conditions of 850 psi, 900 degrees Fahrenheit.

Contemplated expenditures of the El Paso Electric Co. in the next two years will total $4,850,000. Of this figure $3,275,000 is scheduled for this year, the balance for 1949. Last year the company's expenditures were placed at $1,119,280. Estimated cost of a new 20,000-kilowatt generator to be installed next year is $3,310,000. A 15,000-kilowatt addition was made at the Rio Grande power plant in 1946.

Southwestern Public Service has installed the first standardized 30,000-kilowatt turbine built by Westinghouse. It is operating in the Riverview plant at Borger and is base loaded at approximately 33,000 kilowatts. The 650-pound

(Continued on page 52)



Left, work continues on the new hydrogen cooled G-E turbine recently installed in the Denver City, Tex., plant of the Southwestern Public Service Co. Right, interior view of the El Paso Electric Co. plant.

PRODUCTION

Cost Accounting Facts and Fantasies -- IV

BEGINNING IN MAY

In the next issue of MR, author Norton will begin a series of three articles dealing with the question of whether manufacturers should make or purchase certain articles. To appear in consecutive months, titles of the articles are: "To Make Or To Purchase;" "What About Sub-Contracting Today?" and "Distribution Problems of The Small Manufacturer."

THIS is the fourth and final article in a series which began in our January issue. The previous articles included a discussion of a number of actual situations in which incorrect decisions were made because management had received wrong impressions from cost accounting figures. The persons making these incorrect decisions failed to realize that even the best cost accounting figures are apt to be valid only for the specific purpose for which each particular cost accounting system was constructed. The previous articles also discussed several of the more important methods used for the distribution of indirect overhead expense, and showed how the various common methods gave widely varying cost figures when used indiscriminately.

This article will continue the discussion of the various methods that are commonly used in the distribution of indirect overhead expense, and will also describe an ingenious method used by one manufacturing company in an effort to obtain cost accounting figures that were both accurate enough to serve the desired purpose and also obtainable at reasonable expense in the cost accounting department itself.

When establishing formal cost accounting systems, companies naturally try to utilize information which they have previously been securing for other purposes. Most manufacturing companies seem to keep some sort of record of the direct labor cost of each job order and the availability of this information is probably an important reason why so many manufacturers use the direct labor method of distributing indirect overhead expense. As was pointed out in the preceding article, few manufacturers seem to realize the great differences in the costs which are obtained when using the various methods of distribution, nor do they seem to use much care or ingenuity in seeking that cost accounting system which will give reasonable results with lowest cost in the cost accounting department itself under the particular conditions which exist in their own plants. The information given in the following example may perhaps assist other manufacturers to develop cost accounting systems which are as ingenious in adapting some cost accounting system to their specific situations.

By
Paul T. Norton, Jr.
Associate Editor

A successful southern furniture manufacturer produces both dining room furniture and bedroom furniture but follows the usual custom of the southern furniture industry in separating completely the production lines of the two kinds of furniture. He also produces chairs on a separate production line. He also follows the usual custom of the industry in producing only a single price range on any one production line. These conditions would make the cost accounting problem extremely simple if it were not for the fact that in each of the few patterns being made at any time there is no standard combination of pieces per suite. Suites are sold in various combinations of the pieces that are made to the same pattern and contain various numbers of pieces. Fortunately, each piece travels the same route through the factory, but it is necessary to establish a cost for each of the many pieces which in various combinations make up a suite, as it is sold to various customers.

The omission of several subheads in Mr. Norton's article in March may have made it difficult for some readers to understand fully the comparisons of the various methods of distributing indirect overhead expense. The subhead, "Direct Material Method" appearing in the first column on page 66 applies only to the first of the four short paragraphs. For the remaining short paragraphs, the Subheads should be respectively: "Direct Labor Method," "Man Hour Method," and "Machine Rate Method." To clasify table five of the article, the title might be: "Apparent Costs When Using Each of the Four Methods of Distributing Indirect Overhead Expense." On page 38, the total man hours should have read: "25,000." In the third column, at the bottom of page 66, the word "no" should be added before the word "more" making the clause read as follows: "but it should be remembered that even the most scientific method of distribution is no more accurate than the assumptions on which the method is based."

Some of the units manufactured on a production line are much larger than others, but rather careful studies have indicated that the total manufacturing cost of each of the many articles manufactured on a single production line varies rather closely with the cost of the material in such article. Chairs are costed separately in a manner similar to that described here.

Hourly rates are used throughout this factory and while there is no very elaborate production planning system there is sufficient control of production to insure a regular flow of work through each of the several departments. The supervision in each department is such that it is believed that a reasonable amount of work is performed each day by each workman even without an incentive wage plan, or any real check through the cost accounting system as to just what the workman does produce each day. Spot checks are, however, made from time to time which give a certain amount of information with regard to the general operating efficiency in the several departments. In addition, a record is kept of the relationship during successive periods between total value of material and total shop payroll. As all the material in process travels the same route through the several departments, any slowing down in any single department becomes apparent almost immediately.

In essence, the cost accounting system used by this furniture manufacturer differs from the usual system in that both the indirect overhead expense and also the direct labor itself for the various articles are distributed as a percentage of the value of the direct material which the bills of material show should be included in each article. It should be noted that in this system it is the value of the material from the bills of material that is charged to the cost of the article and used as the distribution vehicle, and not the value of the material that is actually used. The material actually used for a given article is never determined, but periodic checks are made to see how closely the total amount of material used agrees with what should be used (according to the bills of material) for the amount of furniture actually produced.

To sum up what has been said in the preceding paragraphs, this manufacturer

(*Continued on page 54*)

Conveyor System Speeds Production

Baltimore plant of National Gypsum Co. uses "mechanical marvel" to reach top productive efficiency.

By
Samuel A. Lauver
News Editor

Gypsum rock moves to crushers via one of most modern conveyor systems ever installed. With speeds of from 250 to 400 feet a minute, belts will unload 500 tons an hour.

MARYLAND'S newest major industry recently placed in operation by the National Gypsum Company is a giant mechanical marvel capable of scooping up big batches of gypsum rock, transporting that rock at fast speeds to an intricate maze of equipment processing the rock into various plasters and either bagging it or compounding it to reduce it into mixtures that ultimately roll off a 550-foot long machine as the lath or board used in building construction.

Long conveyors reach out from the $4,500,000 plant, which is located on the Baltimore waterfront to perform the herculean task of starting the gray-brown rock on its way. Other conveyors continue the movement from crusher to crusher, from drier to grinder, and from bin to bagger, as the rock loses its original five-inch size, is relieved of its moisture content, is ground to dust and even is measured to determine if its minute size is proper for continuing toward the finished product.

The first lap in what would be a back-breaking job if manual labor were used, is via the belt conveyors. These are installed both inside and outside. One extends 775 feet along the length of a new $1,500,000 municipal pier where the ships are emptied of their rocky cargos. Another stretches the 575-foot length inside the pier shed. A third belt discharges in the area known as open storage 665 landward. Cross and branch conveyors connect these main routes with each other and with the plant buildings.

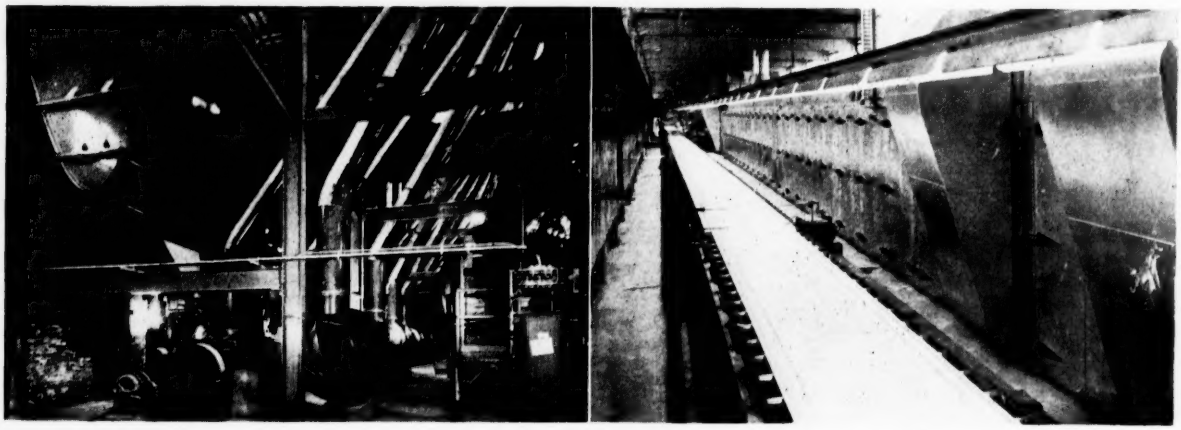
Fast Operation

Speeds range from 400 feet a minute down to 250 feet. The 775-foot conveyor on the pier operates at the high speed and delivers rock at the rate of 500 tons an hour. The reclaiming conveyor inside the pier shed operates at the lower speed and moves rock at the rate of 200 tons an hour. A Harnischfeger crane operates in connection with this interior reclaiming belt.

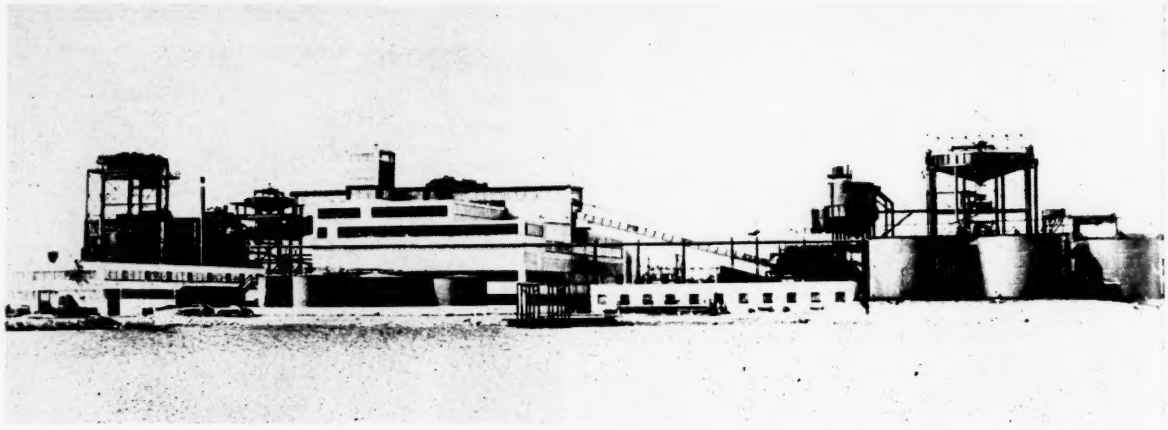
The route from the pier to outside storage is installed atop five 56-foot high concrete towers. It is from the middle of these that a 137-foot branch conveyor completes the trip to the primary crusher. Gypsum can be reclaimed from the open storage piles by means of a Sauerman drag scraper into an underground tunnel housing a belt conveyor. Bucket elevators carry the rock to the overhead operation. The conveyors are of Link-Belt design; the belts of Buna S rubber of United States Rubber Co. manufacture.

Some idea of the colossal size of this materials handling job may be gained

(*Continued on page* 60)



The Raymond mill below the huge bin, left, is one of five to grind gypsum rock to flour-like fineness. Large chutes and spouts connect the precipitators and dust collectors above. Right, a 550 foot long sheet of gypsum wall board rolls along at 95 feet a minute in the modern system at the new $6,000,000 Baltimore plant.



Above is the International Minerals Co., plant at Noralyn, Fla. The installation was built with 1,730 tons of structural steel and over 900 tons of plate work from the Ingalls Iron Works at Birmingham, Ala.

First Quarter Construction Contract Value Totals $651,659,000 In The South

SOUTH'S CONSTRUCTION BY STATES

	March, 1948		Contracts Awarded First Three Months 1948	Contracts Awarded First Three Months 1947
	Contracts Awarded	Contracts to be Awarded		
Alabama	$ 36,183,000	$ 12,336,000	$ 53,836,000	$ 13,276,000
Arkansas	6,286,000	30,273,000	26,165,000	4,843,000
Dist. of Col.	2,104,000	28,527,000	11,779,000	6,419,000
Florida	38,770,000	19,485,000	75,447,000	28,554,000
Georgia	12,505,000	22,866,000	26,869,000	63,916,000
Kentucky	3,479,000	10,496,000	14,140,000	918,000
Louisiana	15,986,000	80,780,000	63,568,000	17,677,000
Maryland	25,000,000	50,704,000	48,007,000	21,730,000
Mississippi	3,179,000	29,327,000	17,209,000	23,941,000
Missouri	9,636,000	6,896,000	23,790,000	6,092,000
N. Carolina	10,799,000	22,921,000	29,285,000	9,980,000
Oklahoma	1,495,000	79,514,000	20,138,000	6,516,000
S. Carolina	5,452,000	5,773,000	14,549,000	12,509,000
Tennessee	13,591,000	92,939,000	19,641,000	10,165,000
Texas	50,895,000	270,908,000	156,697,000	98,439,000
Virginia	5,461,000	29,506,000	15,390,000	10,824,000
W. Virginia	16,178,000	3,113,000	35,149,000	5,553,000
TOTAL	$256,999,000	$796,364,000	$651,659,000	$341,052,000

SOUTH'S CONSTRUCTION BY TYPES

	March, 1948		Contracts Awarded First Three Months 1948	Contracts Awarded First Three Months 1947
	Contracts Awarded	Contracts to be Awarded		
PRIVATE BUILDING				
Assembly (Churches, Theatres, Auditoriums, Fraternal)	$ 10,472,000	$ 21,280,000	$ 19,423,000	$ 3,022,000
Commercial (Stores, Restaurants, Filling Stations, Garages)	12,535,000	8,583,000	22,609,000	11,890,000
Residential (Apartments, Hotels, Dwellings)	65,707,000	20,136,000	126,632,000	36,010,000
Office	1,323,000	4,160,000	6,508,000	9,450,000
	$ 90,037,000	$ 54,159,000	$175,172,000	$ 60,372,000
INDUSTRIAL	$66,771,000	$402,892,000	$122,753,000	$124,359,000
PUBLIC BUILDING				
City, County, State, Federal and Hospitals	$ 19,593,000	$ 79,275,000	$ 83,495,000	$ 27,093,000
Schools	24,709,000	53,246,000	85,106,000	19,573,000
	$44,302,000	$132,521,000	$168,601,000	$46,666,000
ENGINEERING				
Dams, Drainage, Earthwork, Airports	$ 15,489,000	$ 69,469,000	$ 60,925,000	$ 36,655,000
Federal, County, Municipal Electric	7,250,000	15,048,000	9,896,000	3,225,000
Sewers and Waterworks	5,814,000	27,828,000	22,352,000	12,941,000
	$ 28,553,000	$112,345,000	$ 93,173,000	$ 52,821,000
ROADS, STREETS AND BRIDGES	$ 27,336,000	$ 94,447,000	$ 91,960,000	$ 56,834,000
TOTAL	$256,999,000	$796,364,000	$651,659,000	$341,052,000

March Figure Is: $256,999,000

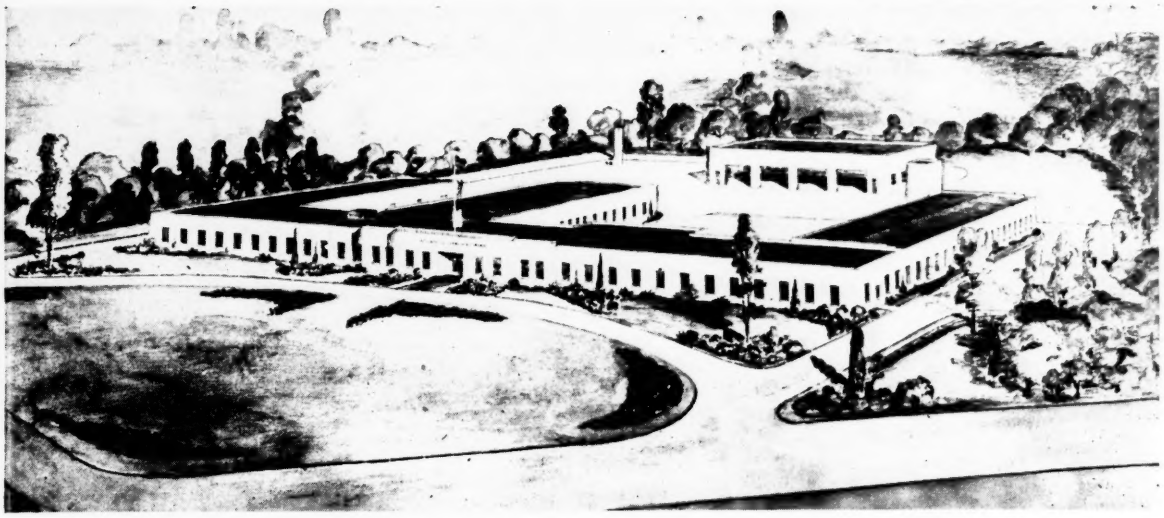
THE first quarter of 1948 saw an accumulation of $651,659,000 of construction contracts awarded in the area below the Mason and Dixon line, or an increase of more than ninety-one per cent over the valuation placed on southern awards during the comparable period of last year.

Southern construction in March amounted to $256,999,000, the second highest post-war monthly total, continuing the upward trend first evidenced in February and exceeding that month by more than sixteen per cent. The March figure lacked but fifteen per cent of being three times the total recorded in the third month of last year.

Substantial increases in industrial and private building contract values—in the one case one hundred eighteen per cent and in the other seventy-three per cent—bolstered the March figure in face of lower dollar values in public building and engineering and highway contracts.

Value placed on private building in March, as tabulated by the CONSTRUCTION magazine, was $90,771,000. Similar work in the other months of this year was $52,314,000 for February and $32,821,000 for January. Dollar value of industrial awards was $66,771,000, also the peak for the year so far, totals for other months being $30,581,000 for February, $25,401,000 for January.

Totaling $156,808,000, private building and industrial construction comprised sixty-one per cent of the March figure. Other components in the order of value were: Public building, $44,302,000, or seventeen per cent; engineering construc-



At Dallas, Tex., the Atlantic Refining Co., is constructing these laboratories at a cost of $2,000,000. When completed, center will be production headquarters in company's drive to increase oil recoveries.

tion, $28,553,000, or eleven per cent, and highways and bridges, $27,336,000, or ten per cent.

The $651,659,000 three-month total is unequalled in the annals of southern peacetime construction. It has been surpassed only once and that was during the initial quarter of 1942, which was the first actual war year and the highest from the viewpoint of southern construction. The total of contracts for the first quarter of that year was $931,059,000.

The two major components of the current quarterly total are private building with its $175,172,000 total and public building amounting to $168,601,000. Together these aggregate more than fifty-three per cent of the value of southern construction for the year so far.

Southern industrial construction amassed during the 1948 first quarter amounted to $122,753,000, or approximately nineteen per cent of the total for all work. Other constituents of the figure were the $93,173,000 for engineering construction and $91,960,000 for highways and bridges, each approximating fourteen per cent of the entire total.

Last year at this time, industrial construction was the leader among the various categories as tabulated by the CONSTRUCTION magazine. The $124,359,000 for such construction represented thirty-six per cent of the quarterly figure at that time. It was only twice the industrial contract value for the third month of 1948.

The private building figure of $60,372,000 for the first 1947 three months was about one-third less than the current March total for such building. Public in the three months is just a small percentage above what it amounted to in March. Both engineering construction and highways and bridges in the three months of last year were above the current March figure but below the current first-quarter totals.

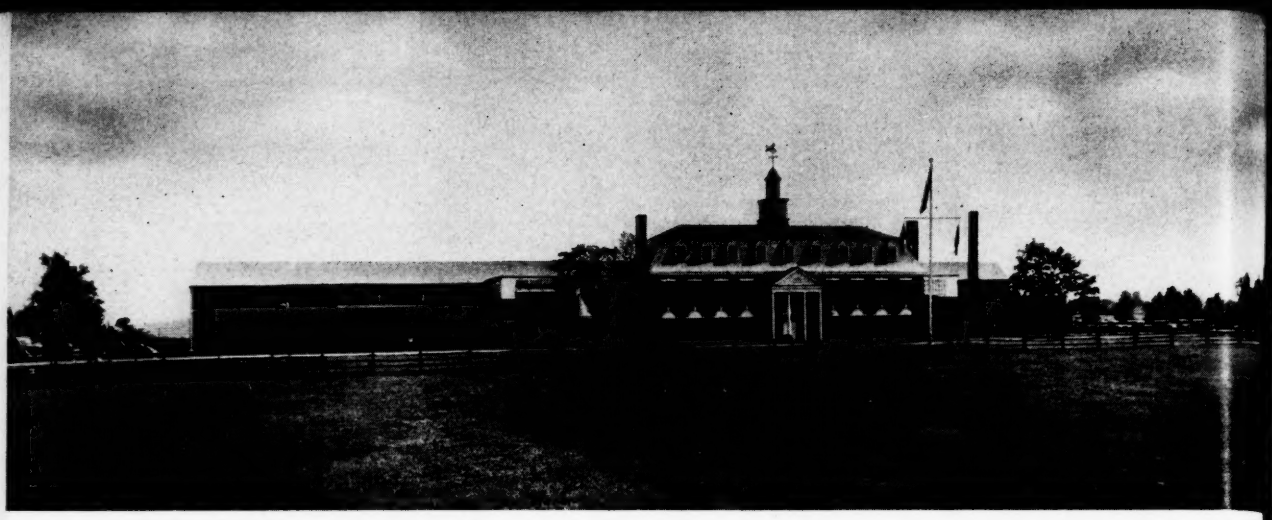
What is yet to come is difficult to predict, even by the best informed authorities in the construction field. A continuation of the present high level of construction values is expected. However, one leading contractor summarizes the situation in the words that "the honeymoon is over," in effect confirming other opinions that owners are more and more resorting to the price benefits resulting from competitive building.

Another straw in the wind is the decreasing number of bidders on some projects. This was a point recently made by a high government official. He emphasized the small number of bids received for federal aid highway construction projects. This situation was further confirmed last month when on one project no bids were received, on another there were only two. A large airport paving project not many weeks previous resulted also in only two proposals.

Stabilization of construction employment is another factor receiving the attention of the thinking members of both the contractors and labor union groups. A representative of one of the local chapters of a national contractors' organization issued a warning that unless steps are taken to bring about better equilibrium in construction "less than full employment" will result.

Prior to this purely local action, which included discussions with local labor leaders, the National Associated General Contractors of America has revealed the progress made toward elimination of jurisdictional strikes by agreements between both employers and building workers' groups. Effective settlement of such disturbances was viewed as possible, but not to be accomplished by the unions alone, but by the employers and the unions.

National Gypsum Co.'s plant at Baltimore, Md., produces lath and board used in construction. Installation comprises Maryland's newest major industry.



To visitors, the Rochester plant at Culpeper, Va., might pass for a historical restoration or a college campus.

Rochester Ropes, Inc.

A Persistent Strand

From the sturdy hemp rope of a past era through today's stranded steel products, this firm contributes an indispensable instrument.

NESTLED in the rolling hills near Culpeper, Va., the main plant of Rochester Ropes, Inc., is continuing a history that perhaps is as much a significant tribute to American enterprise as the firm's more modern production achievements.

To John and Nathaniel Rochester, two restless Virginia planters of the Revolutionary War era, goes credit for the establishment of an endeavor that eventually was to evolve modern processes for the production of stranded steel rope, one of the indispensable instruments of industry.

Finding plantation life too bereft of excitement following war adventures, the two brothers, fascinated by the wondrous tales of the frontier told by their crony, Daniel Boone, looked to new horizons. John followed Boone into the Kentucky territory, settled down and established a thriving plantation. Nathaniel journeyed north to what is now Hagerstown, Md., and established mills for flour and nails.

Though history is unclear on the point, John, from the beginning, may have cultivated hemp, the raw material of ropemaking that Nathaniel was to use when he purchased the Hagerstown Rope Works. At any rate an industry was born. Later the rope-making firm moved to New York State, forming a thriving community which took the name of Rochester. Through the years the firm continued to develop products that were much-sought items in domestic and international trade.

It was in 1940 that Rochester Ropes decided to transfer its principal manufacturing operations from New York to some other more suitable location. The decision was made before the new location was selected. For some time, then, the company surveyed conditions in a number of eastern and southern states, and as a result of this study Virginia was chosen as its new home.

And now the question was, what part of Virginia? At what city or town? Since the company management had no preconceived answers to these questions, the decision was finally made by a method of balancing and compromising between the merits of various places. That the town of Culpeper was the selected locality does not mean that other communities would have proved unsuitable. Culpeper seemed an excellent choice because of its position on a main line railroad, because of its fine local power plant, its pleasant character as a future home for those among the management, office personnel, and engineers and technicians who would leave New York, and because it extended a hospitable welcome.

Natives Employed

Once estalished at Culpeper the company followed a policy of employing, in all possible positions, natives of that area of Northern Virginia where Culpeper is situated. And it soon became evident that the one consideration that had not weighed particularly heavily in the choice of Culpeper would have a great deal to do with the company's success there, and that was the excellence of native intelligence, skill and integrity on the job.

With almost no exceptions, the Culpeper men who came to Rochester Ropes to work were entirely without industrial background. Many were farmers—and many still are farmers, working at the rope mill but, with their families, also maintaining their small farms. The early excellence of ther skill was recognized by the government when, on October 2, 1943—less than three years after the beginning of operations—the Army-Navy "E" award was received.

Four extra citation stars were subsequently added to the "E" flag. The New York City plant (at Jamaica, Long Island) won its own "E" on March 30, 1943, and also won four later citations and stars. During the war years the product of both the Culpeper and Jamaica mills was consistently over government specification in every grade and size of wire rope.

The modern manufacture of wire rope is in essence, if not in fact, an assembly line process. At Rochester Ropes' Culpeper plant the loose coils of wire are wound onto bobbins at one end of the mill, and the finished rope emerges from the closing machines at the other end. The method is one of continuous flow, even if there is no actual assembly line.

First the wired bobbins—one for the core and one for each wire in the strand to be made—are placed in the long, hollow-shafted stranding machine. The core, and each wire, is passed through its own individual hollow spindle to the head of the machine, where all are brought together and compressed into a strand, the core being precisely covered, spirally, by the number and size of wires chosen for it.

Wound onto larger bobbins, the finished strands are then placed in closing machines which work on the same principle as the stranders. They twist the strands over the core, and the rope, prelubricated—and perhaps preformed—emerges from the compressing head ot be wound onto reels. It is a machine process throughout. Even the welding of wire ends is done by machine.

At its Culpepper plant Rochester Ropes produces wire rope in practically all important grades and sizes, from

small aircraft cable, automobile tire cord, and stainless steel fishing leaders only one-thirty-second of an inch in diameter, to three inch dredge ropes and hawsers capable of sustaining a load of three-fourths of a million pounds. Standard and specialized types are made in great variety for use as oil field lines, logging ropes, elevator cables, marine hawsers, and contractor's and miner's ropes.

This wide range of wire rope types is manufactured in a plant equipped with the best and most up-to-date facilities for production, office administration, warehousing, shipping, testing, and power generation. A complete laboratory is maintained, providing close control of all processes from the raw material to the finished rope.

In this laboratory a great deal of company time and effort is spent on research in a continuing effort to improve old rope types and develop new ones. One of its routine activities is the tensile-testing of a sample from every reel of rope manufactured in the mill. One end of each sample length is attached to the fixed gripper of an Olsen tensile-testing machine—a giant device, three stories high and with a capacity of 600,000 pounds—while the other end is attached to the movable gripper below.

A measured pull is exerted on the sample rope, and the pounds needed to stretch it, and then to break it, are automatically recorded. This method of tensile-testing insures the uniformity of Rochester standards in every grade and size of rope. The laboratory is also fully equipped with torsion, bending, fatigue, and other rope and wire testing devices.

No College Campus

The company's twenty-acre property—fronting on a spur of U. S. Route 15 and with the main line of the Southern Railroad at its back door—has been carefully developed with a view towards the most modern, streamlined production techniques. However, the modernity within has been concealed by traditional exteriors. It needs more than a glance to tell that this aggregation of Virginia Colonial structure is not a historial restoration, or a college campus laid out with regard for authentic regional traditions in architecture.

The main plant building, comprising the mill proper and the offices, with its white clock face and equine weather vane, could be a commodious meeting house for the Burgesses. So could the huge warehouse, although it contains such downright industrial devices as twenty-five ton traveling cranes. The hydrant and hose house, nestling up against the main building, is a true reproduction of the powder house at Williamsburg. The tool house, which also shelters the incinerators and more fire-fighting equipment, could be mistaken for its original—a Williamsburg settler's cabin.

Main Building

In the main plant building is a stranding machine one hundred and twenty feet long, capable of spinning the most complicated rope constructions, and a closing machine which easily whirls twelve tons of strand bobbins. But in addition, filling the poverty of atmosphere that streamlined efficiency so often breeds, are Dominic Sindona's industrial murals, depicting the saga of rope on the lobby and staircase walls. In the cafeteria, industry is forgotten completely, for here the walls are graphic with mural scenes from Virginia colonial and Revolutionary history.

It is worth remarking that in the sling department Rochester makes slings for all standard and special purposes, that there is an unique hydraulic lift bridge of 20 tons capacity over the railroad spur between the warehouse and main building, and that a complete wood-working department—for the making and repair of reels—is maintained. But it is also appropriate to call attention to the rail-fenced pasture in front of the plant, where sleek brood mares produce a duly accounted profit in thoroughbred colts. The property is artfully landscaped, and beautified (though not yet shaded—the time has been too short) by plantings of almost every tree native to the region.

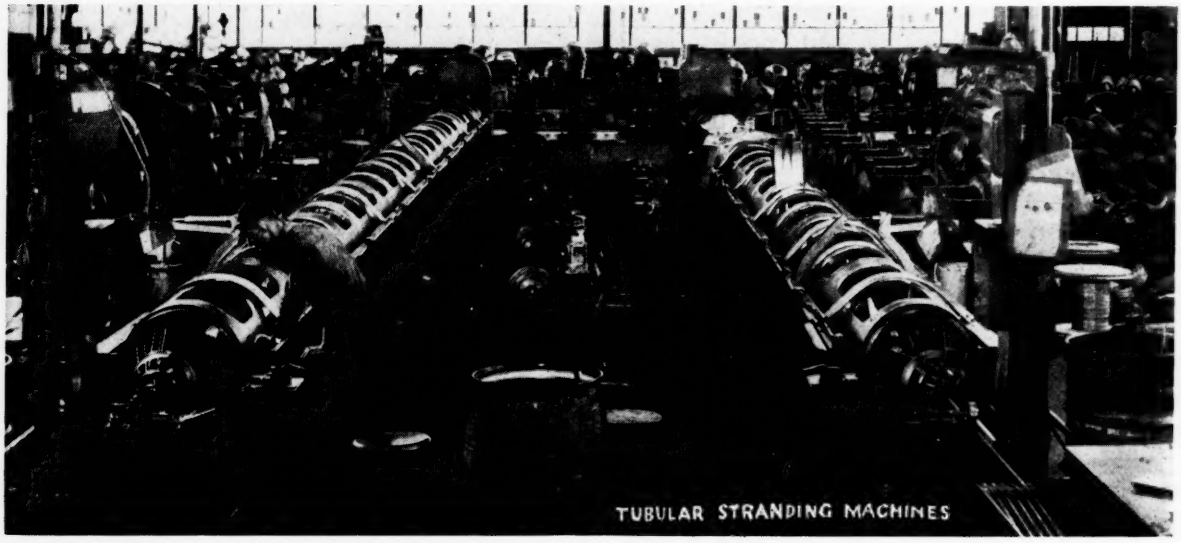
Employee Built

Many of the structures on the Rochester property were built entirely by, or with the aid of, company employees. An example is the eighty-four foot brick chimney built in the autumn of 1946 by five ropemakers turned carpenters and masons. Ninety-nine sacks of cement went into the seven-foot wide base of this chimney, and about 29,000 bricks brought it to its crown.

Rochester employees are all members of a Retirement Benefit Plan supported entirely by company contributions. The plan provides for substantial life insurance and adequate benefits at the time of retirement, with security for the employee's widow if he should die after retirement.

The company maintains branch offices and warehouses in such central locations as New York City, Birmingham, Houston, and San Francisco, and keeps constant stocks of wire rope in other less important, but equally strategic, places. In addition, an export office is located at New York City, and an active trade is carried on with all parts of the world.

Rochester Ropes is at present headed by William L. Rochester, of the fourth generation in direct descent from John Rochester of Kentucky. Others of the family line now connected with the firm are John Rochester, of the fifth generation in direct descent from Nathaniel Rochester, and Mary Louise Rochester and William L. Rochester, Jr., fourth and fifth generations in direct descent from John Rochester.



At first, native workers who came to work for Rochester Ropes were entirely without industrial background, but the early excellence of their skill was recognized by the government in 1943 with the awarding of an Army-Navy "E."

Southerners At Work

Birmingham Chamber Chooses G. A. Mattison President

George A. Mattison, Jr., has been chosen as president of the Birmingham Chamber of Commerce to fill the unexpired term of the late John W. Black.

Mr. Mattison was nominated by a committee composed of members of the executive committee. He had previously served as president of the chamber of 1942 and 1943.

Charles S. Thorn, president and general manager of the Birmingham Electric Co., was elected a director at large.

Norris Candies, Inc., Names R. L. Henderson, President

R. Lawton Henderson has been elected president of Norris Exquisite Candies, Inc., Atlanta, Ga., to fill the vacancy caused by the death on February 4 of Mrs. Frank E. Lowenstein, it was announced following a meeting of the board of directors.

Mr. Hernderson, who began his career with the company in 1924, previously had been vice president and general manager.

"He is recognized throughout the candy industry as one of the leaders in the field of selling and merchandising

R. L. Henderson

high grade packaged chocolates and confections," said S. A. Ruskin, Secretary-Treasurer of the company.

Central of Georgia Appoints E. Cocke, Jr., Industrial Agent

The appointment of Erle Cocke, Jr., as industrial agent for the Central of Georgia Railroad has recently been announced by Harrell L. Perkins, executive assistant in charge of the road's industrial development division.

Mr. Cocke has been serving as executive director of the Agricultural and Industrial Development Board of Georgia since reorganization of the board last year. His new appointment is effective April 15.

He succeeds Mr. Perkins as industrial agent. The latter was moved up to the newly-created position of executive assistant as a result of the railroad's greatly expanded industrial program.

Judge Blanton Forston, Athens, development board chairman, accepted with regret Mr. Cocke's resignation and praised his work with the state agency. Mr. Cocke is the son of Erle Cocke, Sr., president of the Fulton National Bank of Atlanta.

Chemical Society Names R. V. Mellefont, Treasurer

Election of Robert V. Mellefont of Washington, D. C., as treasurer of the American Chemical Society has been announced by Dr. Charles Allen Thomas, president of the Society, following a meeting of the Board of Directors.

Mr. Mellefont, former vice-president and cashier of the National Capital Bank of Washington, succeeds Robert T. Baldwin of New York, who retired recently after sixteen years in office. Mr. Mellefont becomes the Society's first full-time treasurer, with offices in the Society's headquarters in Washington.

The new treasurer was born in Washington on October 30, 1908. He attended the American Institute of Banking there and studied commercial banking and investments at the Graduate School of Banking, Rutgers University.

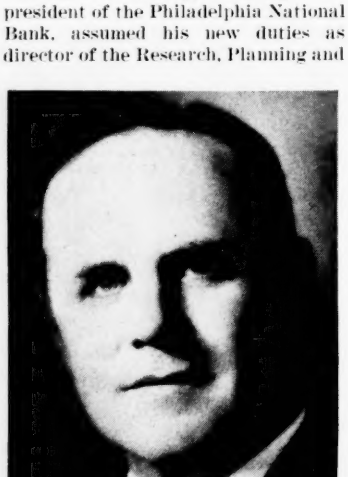
Starting as a runner for the Riggs National Bank of Washington in 1926, Mr. Mellefont became assistant cashier and assistant manager of the bank's Park Road branch before he joined the National Capital Bank as vice-president and cashier in 1943. He is a member of the Washington Board of Trade.

American Viscose Names Redford Technical Assistant At Roanoke

M. W. Redford, former manager of industrial relations, has been named as technical assistant to the manager of the Roanoke plant of the American Viscose Corp. The industrial labor relations offices are in Philadelphia and Mr. Redford will be succeeded there by Arden M Mook, who has been connected with the department since 1946.

L. W. Bishop Returns To South Carolina As Director Of State Development Board

Louis W. Bishop, formerly vice president of the Philadelphia National Bank, assumed his new duties as director of the Research, Planning and



Louis W. Bishop

Development Board of South Carolina, on March 1. Mr. Bishop, a native of Piedmont, S. C., succeeded Robert M. Cooper, director of the board since its organization in 1945, who recently resigned to become an executive of Paintset Fashions, Inc., South Carolina garment manufacturers.

As a vice president of the Philadelphia National Bank, one of the largest in the nation with resources of approximately $800,000,000, Mr. Bishop has been in charge of all Southern business of the bank in the area from the Potomac River to Texas.

Mr. Bishop has had extensive experience with State and American Bankers Association's activities. He was chairman of the committee which prepared the book on bank operation, "Standard Forms and Systems," which was used throughout the country and abroad. So much interest was shown in the book that the American Bankers Association appointed Mr. Bishop chairman of a committee to revise the manual. It subsequently appeared under the title of "Simplified Banking Forms and Procedure."

Mr. Bishop also served as a member of the Bank Management Commission of the American Bankers Association for two three-year terms, and spoke frequently to clearing house and banking associations. He taught several times at summer schools at the University of North Carolina and the University of Richmond.

Harold A. Young is Honored At Little Rock Chamber Meeting

The Greater Little Rock Chamber of Commerce honored Harold A. Young, Pulaski County planter, recently elected to succeed Mr. Oscar Johnston as president of the National Cotton Council, at one of its weekly luncheon meetings last month.

Mr. Young was a member of the original committee that set up the organization plan which has proved to be so potent a factor in the Cotton Council's work. In speaking of Mr. Young's suitability for his new position, Mr. Johnston stated: ". . . He (Mr. Young) has served faithfully and worked diligently in all of the Council's activities, wherever needed, and he has both the experience and ability to meet with credit any responsibility which may be imposed upon him in his new position. . . ."

Peak Named Manager By Old Dominion Box Co.

Malcolm A. Peak, who, except for a three year period in the Navy, has been associated with Old Dominion Box Co. for 27 years, was recently named manager of the large Standard Line Division of that company.

Since 1920, when he started as a shipping clerk at Old Dominion, Mr. Peak has served as production superintendent, purchasing agent, and sales manager of various divisions. His recent experience in the general sales office makes him a natural selection for his new position as manager of the division which produces all types of retail and stock boxes.

A resident of Charlotte, N. C., Mr. Peak is a native Virginian and was educated in the Lynchburg public schools and at the University of Virginia.

Appalachian Electric Names Hodges, Manager At Charleston

R. E. Hodges, of Ashland, Ky., has been appointed manager of the Charleston, W. Va., division of the Appalachian Electric Power Co., according to an announcement by M. C. Funk, vice president and general manager of the general office in Roanoke, Va.

Mr.. Hodges succeeds W. F. Ficklen, who will continue as vice president and director but will be relieved of the managerial duties of the Charleston division.

Mr. Hodges has been general manager of the Kentucky and West Virginia Power Co., Ashland, Ky., an affiliate of the Appalachian Electric Power Co.

Reynolds Names Norfleet Division Industry Manager

Leon Norfleet has been named industry manager of the Marine Division of the Reynolds Metals Co., Louisville, Ky., according to an announcement from W. G. Reynolds, Vice President of the Company's parts division.

As industry manager of the Marine Division at Reynolds, Mr. Norfleet will be in charge of sales of the Reynolds Aluminum boat and all other marine products made by Reynolds.

He has already established headquarters at Plant 14 in Louisville.

Born in North Carolina in 1918, Mr.

Leon Norfleet

Norfleet is a graduate of the University of North Carolina with a B.S. degree in Commerce. He lives with his wife and one daughter at 3700 Dayton Road, Louisville 7, Ky.

Texas Firm Names L. B. Blalock Industrial Development Director

Lewis B. Blalock, heretofore manager of industrial sales, has been appointed to the position of director of industrial development, John W. Carpenter, president and general manager, Texas Power and Light Co., announced recently.

"Texas Power & Light Company has always been interested in developing the territory it serves," said Mr. Carpenter. "Before the war we had a most active industrial development department which assisted chambers of commerce and other civic groups in attracting new industries to various communities. This department is now being revived, and we feel that Mr. Blalock's wide experience in industrial circles will enable him to render the fast-growing cities and communities in North, Central and East Texas served by the Company a very constructive service."

Mr. Blalock began work with the Texas Power & Light Co. in 1925 as power sales engineer. In 1938 he was made supervisor of industrial sales and later became manager of industrial sales. A native of Kosse, Limestone County, Tex., he studied electrical engineering at Texas A. & M. College and at the Carnegie Institute of Technology in Pittsburgh, Pa.

Mr. Blalock will be succeeded as manager of industrial sales by D. S. Coffman, heretofore assistant rate engineer for Texas Power & Light Co.

A. S. Wilson Directs Current Southern Machinery and Metals Exposition

Dartmouth educated Alva S. Wilson was a natural choice for president of the 1948 Southern Machinery and Metals Exposition which runs from April 5 to 8 in Atlanta's Municipal Auditorium.

Mr. Wilson served as head of the Warm Springs Foundation's Accounting department in 1934, and in 1936 he joined the Auto-Soler Co. in Atlanta as its vice president. He is described by friends as one of those people who lifts himself by his boot straps, and in so doing, lifts his job, his company, and his associates along with him. Aided by a fine knowledge of human engineering and progressive management, he has directed preparation of this year's exposition which is expected to surpass the fine showing of the past two years.

According to Mr. Wilson, this year's show will feature more exhibitors showing a greater number and variety of products, and many more people are expected to attend.

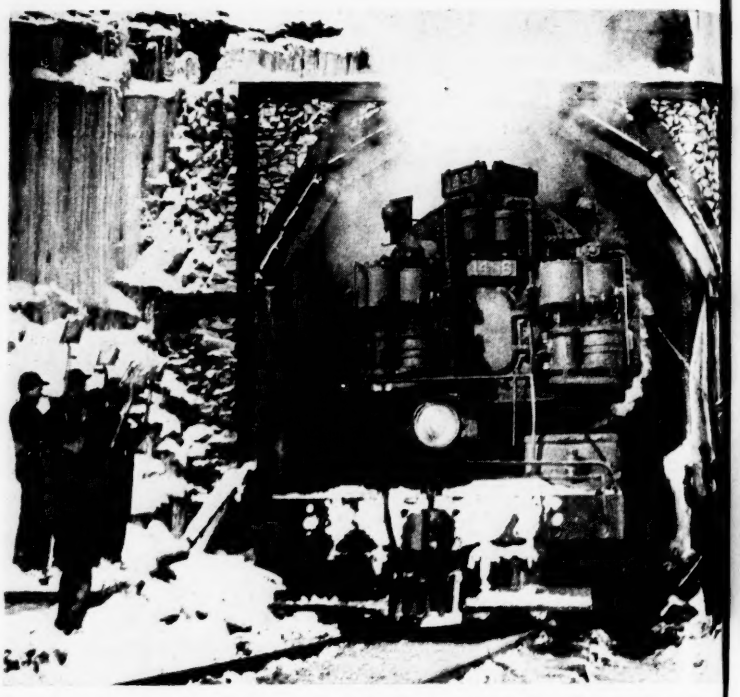
The fact that last year's exposition drew more than 7,500 people from throughout the South stamped this concentrated showing of industrial products from all over America as the focal point of contact between manufacturers and Southern industry.

Emphasis this year is placed on assisting Southern industry in keeping pace with the heavy demands that are now being placed upon it. Mr. Wilson's contribution toward the accomplishment of this goal is recognized and appreciated by all concerned.

Alva S. Wilson

3,000 Feet to Coal

C. & O. Railroad's New Tunnel Opens Vast Reserves in Wise County, Va.



Track workers hoist shovels in salute to the first train through the C & O's newest tunnel, a 3,622-foot bore crossing the Kentucky-Virginia state line. Tunnel will open vast coal reserves in Wise County, Va.

IN the early hours of a cold January morning, workers of the Chesapeake and Ohio Railway Co. "holed through" the last remaining feet of earth, completing a tunnel that would make available to industry 300,000,000 tons of coal reserves in the vast, undeveloped fields in Wise County, Va.

Crossing the Kentucky-Virginia state line near the Summit of Pine Mountain, the single track tunnel, stretching 3,622 feet from portal to portal, is part of a 14 mile rail extension from Jenkins, Ky., to the untapped reserves in Wise County.

Running through Almira and Pound, Va., the extension ends at a tipple location of the Clinchfield Coke Corp. on Meade Fork.

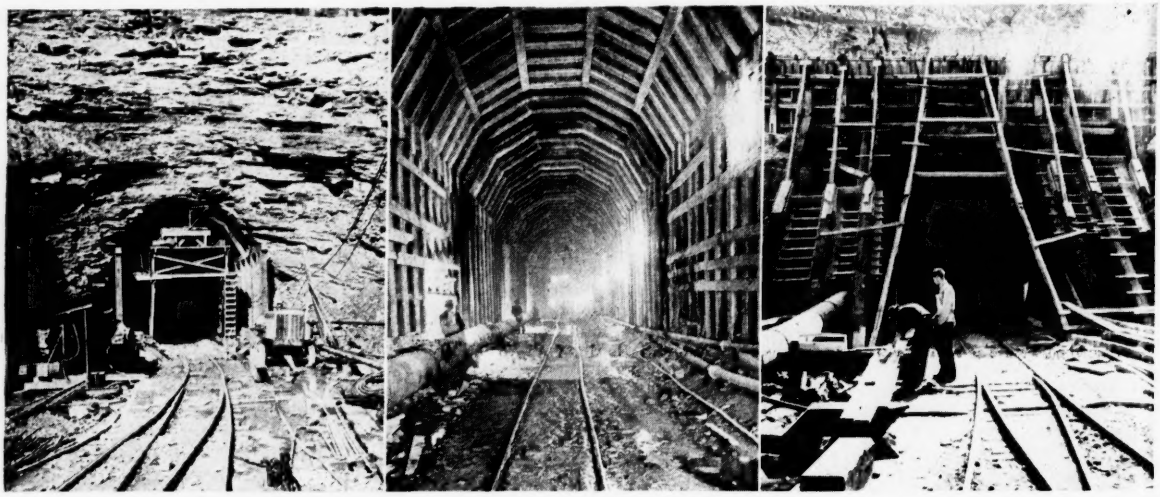
Actual boring of the tunnel started on the Kentucky side in late 1946, on the Virginia side in April, 1947. To Chief Engineer L. T. Nuckols and his crew the soft rock and earth encountered made the "toughest tunneling proposition" they had ever experienced.

Rock and earth began to fill the excavation soon after it was blasted. To meet this, engineers cut back the hill above the tunnel and reinforced the timber lining at the west end with eight inch steel beams to offset inward pressure of the walls, downward pressure of the roof and upward pressure of the floor.

For weeks, the forward progress was a slow, grueling task. To move the rock, explosive charges were placed in 80 holes drilled simultaneously in the rock face. Each blast would advance the tunnel 10 to 12 feet. Then the process would be repeated. In all, more than 84,000 cubic yards of rock and earth were excavated in drilling through the hills.

Finally, the tunnel was completed and on February 2, while a foot of snow lay over the approaches, the first train, hauling eight cars of track ballast, passed through the tunnel.

To industry the new tunnel was a welcomed effort. As soon as mining operations reach full production, the C & O will be hauling coal towards industrial furnaces at the rate of 80 cars a day.



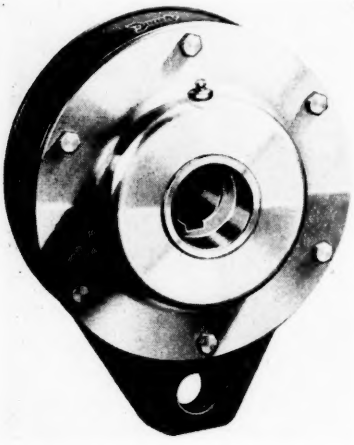
Tunnel's portal on Virginia side, left, is near village of Pound. Boring through Pine Mountain, engineers were plagued by soft rock and earth which filled in new excavations. The bore, center, lined with 12 inch timbers is 22 feet high, 18 feet wide. Original estimated cost of $2,755,000 was exceeded. Fill ins at western end, required heavy reinforcing.

New Products

Backstop

Falk Corp., Milwaukee 8, Wis. has announced a backstop which provides a positive method for preventing reverse rotation on conveyor drives, elevator head shafts, windlasses, winches and on all applications where reverse rotation should not occur.

"Back-run" or reverse rotation, in some machinery operations, may cause serious damage to the machinery and the material being handled. In addition, expensive production delays may result. The gripping action of the Falk Backstop takes place at the precise moment that forward rotation ceases. It reduces the possibility of shock or strain to a minimum.



Prevents Reverse Rotation

The present design and construction is based on fifteen years of actual field experience.

Circuit Breaker

Allis-Chalmers Manufacturing Co., Milwaukee, Wis., has announced a high voltage, high speed, quick clearing (8 cycle), outdoor, frame-mounted oil circuit breaker-type FZO-151.

This breaker, available in 69 kv ratings from 500,000 to 1,500,000 kva interrupting capacities, features a number of improvements to provide higher performance, lower maintenance cost and smooth appearance.

Improvements incorporated in the unit include all welded steel fabrication throughout, including the pole unit top frame; simplified mechanism rearranged for easier maintenance, and decreased total weight. Since the breaker has been designed to fulfill future standards in breaker performance, "5-20" performance (circuit interruption within 5 cycles, reclosing service within 20 cycles) can be provided under specified conditions.

Y-Type Strainer

J. A. Zurn Manufacturing Co., Erie, Pa. has added a high pressure Y-type strainer for pressures up to 600 pounds, to its line. This high pressure strainer is made with threaded flanged or welded connections in many standard sizes or to specification.

The outstanding feature of this strainer is its design which reduces pressure drop through the strainer to a minimum. This unit is suitable for close quarter installations, as well as normal installations, since the perforated strainer sleeve fits snugly into the body.

It is provided with a bolted blow-off connection for blow-down cleaning, and each strainer is hydrostatically tested according to service conditions under which they are required to operate. It is manufactured in various metals including cast bronze, brass, cast iron and cast steel, and available with a magnetized strainer plug for intercepting small ferrous particles.

Indicator Calipers

Woodworth Specialties Corp., Binghamton, N. Y., has recently introduced an outside indicator caliper similar to the inside caliper that it marketed last September.

The calipers are made of stainless steel throughout, electrolytically polished, giving an attractive finish and making them rust proof.

In use, the caliper is adjusted to bring the pointer of the indicator hand to the zero mark and as the pointer moves about twenty thousandths of an inch for every one thousandth of the contacting point, a variation of even a fraction of a thousandth is readily noticed.

The calipers are made in the 4 inch size, but will adjust somewhat larger if necessary.

Caliper

George Scherr Co., 200 Lafayette St., N. Y., announces the manufacture in Switzerland, under its trade name, of a rustless chrome vernier caliper which enables the mechanic and tool maker to measure from 0-6-inch in 1/1000-inch and 1/64-inch for outside, inside and depth dimensions.

The tool is provided with knife edges for measuring the root diameter of threads and with points for accurate dividing. All parts are manufactured to extremely close tolerances with the result that the sliding action is extremely smooth when the vernier is moved along the scale.

The blade and jaws of the tool are hardened throughout. It is well known that the blade of an ordinary Vernier Caliper soon develops wear and is very easily damaged. In the Scherr Vernier Caliper this disadvantage has been overcome by making the slide of rustless chrome and of such a degree of hardness in comparison with the bar, that the wear between the two members is virtually negligible making for extremely long life. The graduations are extremely fine as evidenced by the microscopic comparison of the graduation of the Scherr Caliper with that of an ordinary Vernier Caliper. The material is thoroughly normalized thus eliminating the possibility of change in size over the course of time. The jaws have an optically lapped finish and when checked with optical flats show that the measuring surfaces are accurate to eight millionths of an inch. The jaws are also guaranteed to be parallel to each other.

"Continuous Miner"

Joy Manufacturing Co., Pittsburgh, Pa., has produced a "continuous miner," which it is now testing at the Pittsburgh Consolidation Coal Company's mines in Daisytown, Pa. When and if the machine is perfected, it will bring radical changes in mining methods that have been standard for years. Blasting will no longer be heard in the pits, and the cutting and loading machines that are today's main elements of mine mechanization will largely give way to a "complete" machine.

When in use, this machine would cause manpower needs to drop sharply. These needs now account for 60 per cent of the cost of producing coal. One of these machines manned by one crew would do the work. A completely mobile piece of equipment moves against the solid barrier of the mine face, shatters the coal, loads it and moves it steadily to trackless shuttle cars which then start the coal on its trip to the surface. The Joy machine is still under wraps, and only those persons connected with its manufacture and operations have been permitted to see it so far.

Automatic Filler

MRM Co., Inc., 193 Berry St., Brooklyn, N. Y. has introduced a fully automatic filler.

The adaptable filler handles all styles and shapes of containers and mouth openings from a fraction of one ounce through one quart, and is adaptable to quick change-overs with no loss of production time, according to the manufacturers.

Viscous, foamy, or still liquids can be handled with equal speed and ease, thus allowing a problem-free and varied production schedule. The MRM Co. manufactures other rotary models up to 30 spouts for higher production requirements.

Steel Drawing Compound

Northwest Chemical Co., 9310 Roselawn, Detroit 4, Mich. recently announced a heavy-duty compound for drawing steel, designed primarily for use without dilution. It is identified as Super-Draw M-106. However, it may be thinned, if necessary, up to two parts of warm water, by volume, to one of the compound. Relatively low in pigment and homogenized, its suspension is stable even at maximum dilution. It is unnecessary to remove M-106 from parts before welding and this type of Super-Draw has anti-corrosive qualities that make practical storing drawn parts longer, prior to cleaning than when using other pigmented compounds. M-106 cleans readily in pressure equipment; is sterilized in the manufacturing process to prevent bacterial growth, and is non-injurious to the skin. It may be applied by brush, dip, roll, or spray, and spreads well, whether the blank surface is dry or oily.

"Lo-Hite" Hydraulic Jack

Duff-Norton Manufacturing Co., Pittsburgh, Pa. has announced its "Lo-Hite" hydraulic jack for renewing locomotive spring pins, shackle pins, wearing pads, and for other railroad and industrial lifting jobs in close quarters.

The jack is fitted with an independent pump which is connected to the jacking mechanism by a length of rubber tubing. The pump can be operated from the ground or from any convenient plane, while the jack itself is spotted in close, confined positions, otherwise impossible to access.

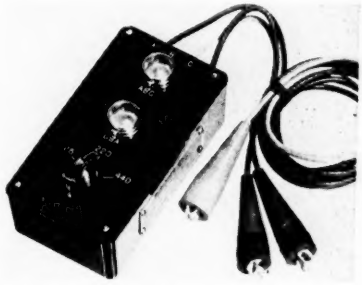
Oil in the jack is sealed in, completely isolated from the jack exterior, thus permitting use in both vertical and horizontal positions. When not in use, it folds into a compact, easy to carry unit.

Indicator

Associated Research, Inc., 231 S. Green St., Chicago 7, Ill. has developed a phase sequence indicator, which it claims makes determination of order in which sine wave voltages succeed one another, simple, fast and accurate. It is used for installing and servicing polyphase wattmeters, motors, watthour meters, power factor meters, alternators, transformer banks and other equipment.

Operation is said to be extremely simple. The three leads are connected, and switch turned to proper voltage. If rotation is C. B. A., lower light will glow; if A. B. C., top light will glow.

The simplicity and accuracy of the instrument is based on the fact that a capacitance connected in a three-phase circuit will cause the current to lag the voltage by 90 electrical degrees. The lights, connected in Y to the circuit, indicate unmistakably the phase order.



Model 40 Phase Sequence Indicator

The model 40 phase sequence indicator can be used with 115, 200, and 440 volt circuits. For greater voltages, special instruments are available on special order. Three leads, three feet long, with rubber insulated clips designated "A," "B," and "C" are colored black and red for ease in determining master lead.

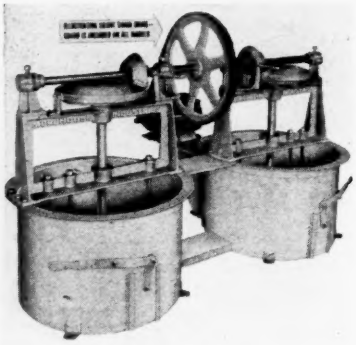
The instrument weighs less than a pound, measures 2 by 3 by 5½ inches, and is completely self-contained except for leads.

New Products

Paste Mixer

Morehouse Industries, 1156 San Fernando Rd., Los Angeles 31, Calif. has announced the availability of a twin-tub paste mixer, designed for manufacturers of a wide variety of materials, including pigments, petroleum products, chemicals, etc.

This mixer is available in capacities (per tub) of 110, 150 and 225 gallons. A full variety of electrical and drive equipment is available for the unit, which is supplied with or without such accessories. Proven by performance in the field, according to the manufacturer, the mixers are ruggedly built to high standards. Adjustable blades revolve at approximately 60 R.P.M.



Twin-Tub Paste Mixer

Washing and Degreasing Box

Rack Engineering Co., Pittsburgh, Pa., has announced production of a perforated steel box for washing and degreasing operations. Constructed of heavy-duty steel, this shop box with perforated bottom and sides is designed for washing and degreasing of parts and products in a variety of sizes and shapes. Manufactured in six standard sizes, the box is adaptable to any type of washing or degreasing operation.

Insect Destroyer

Patent is now pending for a new type of insect destroyer invented by Willie Allen Moore of Grambling, La.

The invention provides a means for drawing insects into a conduit by a current of air, and then into a trap chamber where they are destroyed electrically.

The use of a current of air is partially effective against smaller flying insects such as mosquitoes, flies and gnats and also it can be utilized to vent air from a closed room thus providing better circulation and ventilation.

Conveyors with Magnets

Material Movement Industries, Inc., 9257 Laramie Ave., Skokie, Ill., announces that its lightweight Tote-All Bulk Material Conveyors are now available with an adjustable chute that removes all stray iron from the bulk material being conveyed. The chute, which may be attached or detached as desired, has a powerful, permanent magnet built right into it. It traps nuts, bolts, nails, wire, etc. which may be in the conveyed material and thus protects valuable machinery from breakdowns, helps eliminate product contamination and reduces the danger of fire and explosion caused by "friction sparks" from tramp iron. May be used with any non-metallic material such as chemicals, grains, foods, coal, fertilizers, etc. The magnet is made of high-grade Alnico, is non-electric hence requires no wiring. According to the manufacturer the magnet is extremely powerful, and is guaranteed for life. Maximum recommended speed for efficient operation of magnet is approximately 100 fpm.

Plastic Louver

Holdenline Co., 2301 Scranton Rd., Cleveland, Ohio, has announced an all-plastic commercial fluorescent louver which eliminates eye-tiring surface brightness contrast.

Named the "Arrowhead," this louver is said to be the first of its type, and employs no metal restraining parts. Sides, longitudinal and transverse louver sections are all made of the same material. Self-locking, they are bonded into an integral unit which, the manufacturer states, cannot warp, sag, expand or discolor under any normal operating conditions.

Count Detection

Potter Instrument Co., 136 Roosevelt Ave., Flushing, N. Y., announces development of a count detection system designed to provide a means of counting small parts at high speed for packaging and inventory.

The equipment can be used to replace the inaccurate ratio-weighing scale system, and will provide high speed predetermined counts of absolute accuracy, say the makers.

In addition to the counting of objects, the same system can be applied to totalizing and predetermining machine operations through the use of other systems of detection.

Bearing Lube

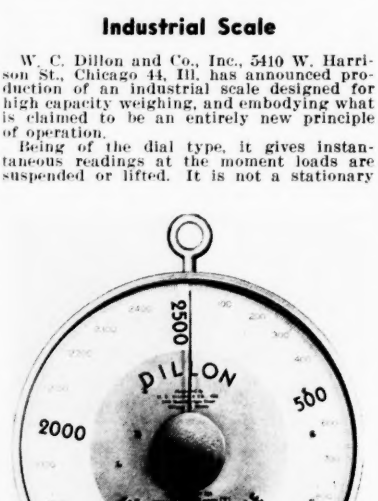
Texas Co., New York 17, N. Y., has announced development of a roller bearing lubricant for use on locomotive, passenger, and freight car journals. The lubricant is designed to replace the liquid oils which have proved not only expensive in themselves, but boosted maintenance and inspection costs.

This product will increase time between periodical inspections, and will eliminate the necessity of station platform journal inspections on passenger equipment and intermediate terminal yard inspections of freight car journals and boxes. It is believed that this lubricant can remain in service for two years or more before repacking becomes necessary.

Industrial Scale

W. C. Dillon and Co., Inc., 5410 W. Harrison St., Chicago 44, Ill. has announced production of an industrial scale designed for high capacity weighing, and embodying what is claimed to be an entirely new principle of operation.

Being of the dial type, it gives instantaneous readings at the moment loads are suspended or lifted. It is not a stationary type scale, it can be moved about in the shop from hook to hook, wherever it is needed. It can be read very easily up in the air on crane hooks, and can be used indoors or out.



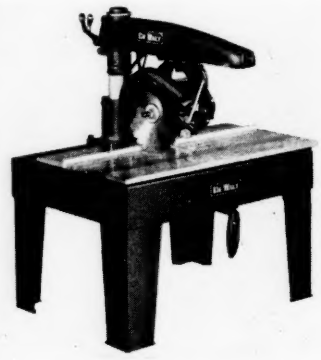
Portable Industrial Scale

Cutting Machine

DeWalt, Inc., Lancaster, Pa., recently announced a machine which, it is claimed, combines the functions of many machines and is ideally designed for all-purpose cutting.

Called the "Cut-Master" model, the basic considerations in its development and construction are safety, accuracy and ease of operation.

The machine is powered with the DeWalt-built, direct drive motor, which is wound with Formex Fiberglass insulation, furnished with grease-sealed-for-life bearings that require no lubrication, self-cooling fan and installed in a heat-treated aluminum case.



DeWalt "Cut Master"

Stock Pusher

Sheffer Collet Co., Traverse City, Mich. has announced a stock pusher that is as easily adjusted as the "Squirrel Cage" type, and that will also feed to the very end of the stock.

It is identified to the trade as "Economy" stock pusher. This is accomplished by means of a dual bearing, one in the mid-section and one in the nose. This arrangement provides fifty to one hundred per cent more bearing length with a corresponding lighter spring tension requirement in each bearing section to accomplish positive feed. This lighter grip distributed over a broader area, greatly reduces wear and fatigue.

In practice it has been found that this pusher will function efficiently three times as long between adjustments and that the total life is increased in the same ratio. This type of pusher has been found particularly adaptable and effective on long feed-outs where feeder travel is greatly accelerated . . . the slippage and bounce-back, normally encountered under these conditions, is eliminated, it is claimed. Pushers are furnished for any stock size, ¼-inch and upward, for any machine and are made of alloy steel with carefully controlled spring temper. All Threads are ground from the solid, after heat treat, and are held to uniform No. 3 fit.

Sanding Disc Backing Pad

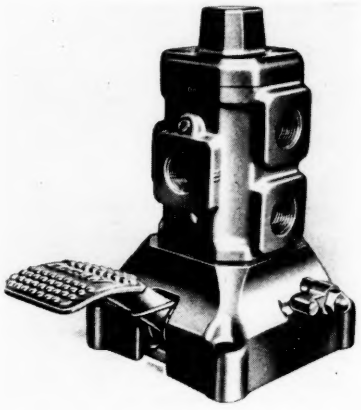
Pratt Manufacturing Co., Inc., Fairmount, Ind, is producing a spiralcool backing pad for disc sanders. This backing pad is made of layers of rubber reinforced with fabric and securely bonded to a slotted iron hub. The slots in the hub forces air through to the back of the sanding disc, keeping it cool under most severe usage. The forced draft action through the spirals on the pad tends to keep the abrasives clean, giving them much longer life. The pads, being made of rubber, allow greater flexibility in working various shapes and contours without the danger of gouging the work, and provides greater contact area of the disc. The forced draft action minimizes the loading up of the abrasive disc thereby reducing costs materially in both labor and material.

New Products

Control Vale

Logansport Machine Co., Inc., Logansport, Ind., recently introduced a foot operated 4-way Logan hydraulic valve, which provides latching or free control of double-acting hydraulic cylinders.

The model 7025 is a balanced pressure valve of the sliding piston type. It is designed without valve seats or packings other than the stem seats at each end, which are subject to only exhaust pressures. The vertical position of the valve body permits an unusually compact unit requiring little floor space.



Logan Hydraulic Control Valve

This dual purpose valve provides two distinct types of control, both obtained from the single operating treadle. Selection is made by means of a convenient lever located on the right side of the valve base.

Smokeless Heaters

Conlon-Moore Corp., Cicero, Ill. has begun quantity production of smokeless coal heaters.

Research and development work on this heater was begun more than two years ago, in collaboration with the Battelle Institute, Columbus, and Bituminous Coal Research, Inc., Pittsburgh. Moore developed a commercial design, cutting the laboratory weight, one-half, perfecting the heating principle and reducing the controls to one, from six in the experimental model.

The principle featured in the heater is a method by which all fuel gases are consumed by routing air currents over and through the burning coal. Even volatile gases which ordinarily escape up the chimney are conserved and burned for their heating value.

Radial Saw

Porter-Cable Machine Co., Syracuse, N. Y., has announced a high speed radial saw, especially designed for economic cutting operations on wood, plastics and some composition materials. This saw, model RS, is powered by a compact, light weight motor, available in one or two horsepower ratings. The motor operates dc/ac 25 to 60 cycles with a spindle speed of 8000 rpm. Due to the high spindle speed, fast, smooth and clean cutting performance is provided. The RS is ideally suited for lumber yards, woodworking shops, maintenance departments, on large and small construction jobs and any other operations where wood needs to be cut quickly and economically.

The compactness of the motor accommodates a 12-inch saw blade, cutting a full 4-inch; thus, a number of 2 by 4's can be laid on a table and cut off in gangs.

Model RS is adaptable for cross cutting, gang cutoff, angle cutoff, bevel cutting, compound 45 degree cut, dado cutting and ripping operations. The motor unit is set vertically to accommodate cope heads, shaper heads, dado saws and groovers.

"Flat Top" Zinc Anode

Wagner Brothers, Detroit, Mich. has introduced a form of zinc anode, destined to solve some of the common problems in electroplating, according to the manufacturer. Known by the copyrighted name of "Flat Top" because of its shape, the anode is said to be so distinctive in appearance as to prevent accidental confusion with cadmium or tin ball anodes, thus avoiding mixing of plating solutions and the consequent loss of time and materials from shut-downs and dumping of plating tanks.

The Flat Top shape is retained throughout the plating process, so that a glance at the anode basket will identify the zinc tank. The anode's smooth surface is free from gates and flash which frequently cause ball anodes to hang on the basket wires, and the effective plating area is from 20 per cent to 25 per cent greater than a ball of like diameter. The greater weight per anode reduces loading frequency. According to the manufacturers, the zinc is 99.99 per cent pure, the highest purity available.

Synthetic Paint

A heavy duty, long-wearing synthetic paint has been introduced by Lowebco, Inc., of Chicago, Ill.

Said to protect concrete surfaces with an abrasion-resisting coating that does not check, crack or "dust," the new paint is being marketed under the trade name of "Oncrete for Concrete."

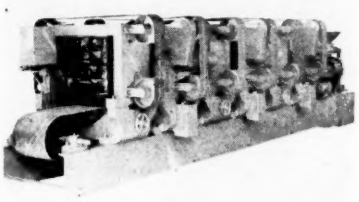
Besides forming a protective covering on concrete, the new synthetic paint can also be applied to exposed metals, machinery, boilers and pipes and to masonry surfaces.

The announcement states that the new paint can be used for factories, and industrial buildings, residences, hospitals, hotels, theatres, public buildings, and for street and highway maintenance.

Magnetic Separator

Dings Magnetic Separator Co., Milwaukee, Wis. recently announced a super-high intensity cross belt magnetic separator (type E), for concentration and purification of magnetic and non-magnetic materials. A few of the materials separated—some of these never before separated magnetically—include: ilmenite, monazite, chromite, garnet, epidote, wolframite and phrrhotite. Weakly magnetic materials previously lost in the tailings can be concentrated into their separate, purified and salable forms. Separator is available with any number of cross belts; an eight belt unit, for example, being capable of concentrating eight separate magnetic products and one non-magnetic. This is accomplished by varying the strength of each cross belt magnet, permitting the separation of materials having different magnetic susceptibilities, as well as separation of magnetic from non-magnetic materials.

A high degree of selectivity is obtained through use of three features: (1) extremely high intensity magnetic pole (patent applied for), (2) hand wheel adjustment of air gap to increase or decrease the concentration of flux lines at pole nose, and (3) variable speed drive on main conveyor belt—all of these features allowing for a control of the amount and type of magnetic material removed and also making possible a successive separation of different materials by each unit.



Cross Belt Magnetic Separator

Micro Relay

Manning, Maxwell and Moore, Inc., Bridgeport, Conn., has announced the addition of a micro sensitive relay to its line of DC amplifiers.

The model provides a full output change of five milliamperes for a two micro-ampere imput change, and is equipped with a mechanical range adjustment for setting the operating point at the desired imput level.

The typical imput signal applications are thermocouple potentials, barrier layer photocell, ionization gauge, strain gauge, gas detection measurements.

Micro Sensitive Relay

This unit is designed particularly for use as a component of other electronic or electromechanical apparatus.

Belt Conveyors

Island Equipment Co., 101 Par Ave., New York 17, N. Y. has announced the discontinuance of the sale of the Unitable which has been replaced by a more modern piece of equipment known as the Island Unitized Conveyor Table, and manufactured completely by Island.

It is built to a rigid standardization of parts which are absolutely interchangeable, thereby eliminating the usual drilling and fitting. The leg supports are likewise of a standard which fits any of their tables. The tables can be coupled together to form as long a unit as may be desired.

This unit can be used as a work table, for assemblying, inspecting and conveying. It is put out in different lengths, and in 11 widths.

Foilclad Pipe Units

Ric-wil Co., Cleveland, Ohio has recently developed what it claims to be an exclusive feature of foilclad pipe units. This claim is based on the fact that the pipe in these units is insulated at the factory to meet individual project specifications. The units are shipped in 21 foot sections, completely prefabricated and ready for installation with only one handling required at the job site. Time and cost of installation are thus minimized.

In the prefabrication of these units at the Ric-wil factory, asbestos, cork or other insulation, as specified, is machine coated with high temperature asphalt and tension wrapped with asphalt-saturated asbestos felt. A second coating of asphalt is followed by a tension wrapping of aluminum or copper foil which forms a perfect bond with the asphalt. The result is a highly efficient, durable unit completely waterproof and weather protected.

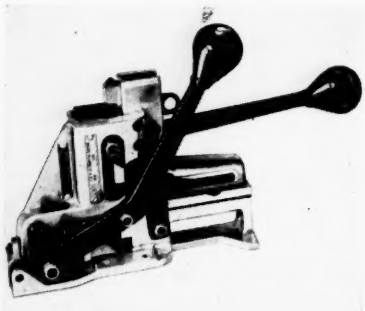
A variant of the basic type of Foilclad Unit employs a pipe supported within a pipe with insulation around the outer pipe. In this way any desired temperature can be maintained within the pipes. Either pipe can carry the process fluid while the other carries the heating or cooling medium.

New Products

Steel Strapping Machine

Signode Steel Strapping Co., Chicago, Ill., has developed a one-tool strapping machine that tensions, cuts and seals with minimum motions. Thus, strapping operations are able to keep pace with other packing and shipping operations, whether the job is done in a conveyor line operation or in a central location.

Known as the A-2 Seal-feed strapping machine, the Signode tool has already proved its efficiency and versatility, it is claimed.



A-2 Seal-Feed Strapping Machine

Although highly durable and sturdily made, the A-2 is surprisingly light in weight. Inexperienced operators, both men and women, quickly develop skill and speed, and turn out a large volume of strapping without tiring themselves.

Exhaust Fan

Hartzell Propeller Fan Co., Piqua, Ohio has announced production of the "Lo-Noise" fan which, the manufacturer claims, is characterized by quiet operation without loss of efficiency.

The blades of the fan are of a very wide design, embodying principles of aerodynamics discovered in the Hartzell Airplane Propeller Plant. They are powered by a totally enclosed motor conservatively rated for continuous duty.

The fan is delivered complete with motor, belt, blades and curved orifice ring, ready for installation and operation when electrical connections are made. It is available in sizes ranging from 28-inch to 48-inch, delivering from about 6,000 to 30,000 cubic feet of air per minute. It is designed for use where quiet operation is desired, such as industrial and business offices, restaurants, stores and home attics.

High Torque Capacity Motor

T. C. Smith Manufacturing Co., Springfield, Ill. has recently marketed a fractional horsepower motor which is said to have a remarkable torque capacity. Particularly suited for such diverse applications as coin machines, directional antennae, and innumerable others, the motor at rated voltage has a stalling torque of 75 inch-ounces.

Small enough to fit in the hand, this new motor is the shaded pole, induction type. With 20 watts input at 115 volt, 60 cycle AC, the no load speed is 20 rpm on the output shaft. Lower input wattages are available at correspondingly lower stalling torques—with output shaft speed at no load substantially unchanged.

The motor is constructed of aluminum and has a built-in gear train. Various gear ratios can be supplied. Bearings are composed of oil impregnated powdered metal. By means of three mounting studs tapped with No. 4 by 36 thread, the motor may be attached to any suitable bracket.

A particular feature of this motor is its magnetic clutch. With the de-energizing of the motor, this clutch prevents any overtravel of the output shaft. (This of course does not include gear train coast when the motor is running free.)

Halftone Control

American Type Founders Sales Corp., Elizabeth, N. J., has acquired exclusive world rights for the manufacture and distribution of the Lens-O-Matic halftone aperture control.

This control enables the photoengraver and offset-lithographer to obtain every tone in the original copy from brilliant highlight to deep shadow detail. The control is scientifically and mathematically designed to close the lens aperture at the proper speed for every tone.

Operation consists of simply pushing a single button after setting the lens at the proper highlight stop. It automatically turns on the arc lamps, makes a balanced exposure, turns off the lights and returns the lens aperture to the original position.

The control can be used with any correct camera exposure system, either on wet plate, dry plate or film.

Lubricity Tester

Nopco Chemical Co., Inc., Lewis and Carter Sts., Harrison, N. J., recently developed a lubricity tester (being built by U. S. Testing Co.) and the purpose of it is to determine the friction qualities of yarn. The equipment utilized, measures the speed of a rider down a known incline for a fixed distance. The test apparatus is applicable to filament yarns and threads.

This tester has been used in the evaluation of knitting lubricants on various yarns and in comparison of sewing threads. It may be used in determining the effect of mercerization on the smoothness of the yarn, relationship between coefficient of friction and abrasion resistance in processing and in other fields. It offers possibilities for testing of surgical sutures for smoothness, and for testing fish lines in the original state and after use.

Can Seamer

Lima-Hamilton Corp., 60 E. 42nd St., New York 17, has announced a high-speed automatic end seamer for square and irregular shaped cans.

Called the Hamilton-Kruse Model No. 150, this is a completely automatic four-head unit with four round rollers on each head. In operation, the cans remain stationary on the base plates during the seaming.

The unit is equipped with automatic body and end feeds, a complete set of seaming parts, and its own motor and control.

This seamer is distinguished by unusually quiet operation and its features include low-speed heads, exceptional ease of adjustment, and automatic lubrication, according to the manufacturer.

Timer

Eagle Signal Corp., Moline, Ill. is manufacturing a small compact timer for battery charges, ovens, dryers, extractors and laundry equipment. Its appearance features extreme simplicity. An important detail of its construction is the transparent polystyrene housing which permits visual inspection of the electrical contracts. The transparent feature is also an added sales attraction, being unique in this type of equipment. The housing is designed so that all the holes and openings can be molded and the parts pushed into place and locked there by the self-tapping screws that hold on the cover. The large pointer can be turned in either direction to the required setting without damaging the timer and there is also a "hold" position at which point the load circuit can be turned "on" without starting timing.

Castor Steer Trailer

Mercury Manufacturing Co., S. Halsted St., Chicago 9, Ill., has announced production of a 15,000 capacity all steel industrial trailer. The trailer is unique in that it is a castor steer vehicle and ideally suited for handling such heavy loads as machinery, dies, etc. The high load capacity is achieved by the use of three heavy duty swivel castors for steering control and two wide faced load wheels. All five wheels are equipped with pressed on solid rubber tires, the castor tires being 12 inches by 4 inches, and the load or rear wheels measuring 15 inches by 7 inches. All wheels are equipped with anti friction bearings.

Water-Bourne Plastic Resin

B. F. Goodrich Chemical Co., Cleveland, Ohio, recently announced development of a water-bourne plastic resin that will form a glove-like film on a hand dipped into it and which later can be peeled off like a rubber glove.

Unlike other resins designed for similar end uses, this substance, called Geon Latex 31X, requires no hot air in converting it into finished products. It is a latex of vinyl chloride resins.

The company said the liquid can be used to make a water paint with a water impervious film that will dry at room temperature; for packaging foods; as a protective covering for fruits and vegetables; as an adhesive, and in other ways.

Geon Latex 31X, the announcement stated is flexible, odorless, grease-resistant, will not support a flame, and adheres readily to paper wood, Fiberglas and textiles. The firm announced that it will not make finished products out of the material, but will sell it to other manufacturers.

Belt Transmission

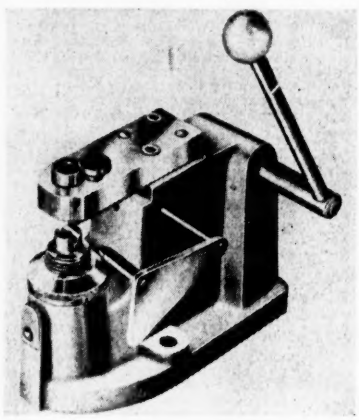
Crain-McCurdy Co., 600 Capital City Bank Building, Des Moines 9, Iowa, has announced manufacture of the Fraizer belt transmission which is designed to work on gasoline engines and electric motors used for loads up to one and one half H.P., with either a 1/2 inch or 5/8 inch shaft. It combines a clutch and speed reducer with a 3 to 1 reduction ratio.

According to the makers, this unit may be readily adapted to power lawn mowers, electric drills, saws, lathes, conveyors, motor scooters and hundreds of other industrial and home uses.

Drill Jig

Manufacturer's Engineering Service, Security Building, Toledo 4, Ohio, has announced its model 750 drill jig, one of the newest additions to the Kam-Grip line of drill jigs and milling fixtures. This jig was designed especially for shops having cross drilling operations on a variety of work stock diameters and in a variety of hole sizes on such parts as pins, small shafts, tubing, screws and screw machine parts.

This model is said to be equally efficient for tool room, experimental department, or the production line. Cam action is employed to



Model 750 Drill Jig

actuate anvil up and down, to and from locking position. The work part is rigidly held with no chance for chattering or slipping, yet a cushion pressure grip assures no marring or scratching.

Also incorporated are the best features of the other standard Kam-grip production models, including manual or automatic operation, adjustable side stop for accurate positioning of hole, sturdy semi-steel castings, and all wearing parts constructed of heat treated machine steel or tool steel.

A LOT OF GROWING TO DO

This is a big country and to furnish nation-wide telephone service, the Bell System has had to be big for a long time. But in the last few years it hasn't been nearly big enough.

Even though we've broken all records and added more than 6,000,000 new telephones in the past two years, there are still about a million orders for service that we haven't been able to fill because of lack of equipment, switchboards, cable and buildings. Many more Long Distance circuits also are needed.

It will take time and a lot of money to make the Bell System big enough for the nation's needs but we're on our way —in a big way—to giving you more and better service than ever before.

BELL TELEPHONE SYSTEM

Power Round-Up

(*Continued from page* 36)

pressure, 30,000-kilowatt turbine to be installed in Amarillo in 1951 will be hydrogen cooled and operated at 37,500 kilowatts.

Total construction expenditures of the company this year amounts to $12,782,746. For the next three years it is estimated that $33,922,176 will be spent for construction. This figure by years is broken into $9,876,116 for 1949, $11,370,060 for 1950 and $12,676,000 for 1951.

Southwestern Gas and Electric Co., is going ahead with preliminary work on a new plant proposed for Cherokee Lake, Texas, for which most of the major equipment such as turbines, boilers and fans has already been purchased. The company recently added 25,000 kilowatts of generating capacity to its system when the new Liberman plant near Shreveport was placed in operation. A second 25,000-kilowatt unit is now being manufactured and installation is expected this fall.

The City Public Service Board of San Antonio contemplates completion of 25,000-kilowatt addition to its Mission Road plant this summer. The unit consists of one high pressure 25,000-kilowatt turbo-generator, one 1,500-pound boiler with a capacity of 275,000 pounds of steam an hour.

Four of the main extensions to the system of Southwestern Public Service Co., Amarillo, Texas, will be made in Texas; the fifth, in New Mexico. The four Texas projects are a station and a new 40,000-kilowatt extension is scheduled to start at Beaumont next year.

Alabama Plans

Operating expenses and construction this year by the Alabama Power Co., Birmingham, will total $38,000,000, the largest total expenditure for these purposes in the history of the company. Of the total, 18,000,000 will be for construction, with approximately $8,000,000 used toward completion of the 120,000-kilowatt steam generating plant under construction at Gadsden.

Scheduled for 1949 completion, the plant will embrace two 60,000-kilowatt steam turbine generators of modern design. They will operate in an atmosphere of hydrogen at 3,600 r.p.m. Each will be supplied with a boiler with a rated capacity of 600,000 pounds of steam per hour, delivered at a pressure of 900 pounds per square inch at a temperature of 900 degrees Fahrenheit. About $382,000 will go for an additional hydro unit at Mitchell Dam and $150,000 for work at other steam and hydro plants. New transmission stations are to cost over $1,000,000, additional transmission lines, $286,000.

Birmingham Electric Co. is in the midst of a comprehensive construction program to add to its transportation and electric facilities. Improvements and additions to the company's electric facilities will increase power supply of the district by more than 40 per cent. Major improvements include a new feed-in substation, as well as an addition to a similar plant and numerous other improvements in the area served.

Virginia Electric and Power Co., with main offices at Richmond, will expand at the rate of $25,000,000 annually for the next three years. The principal expenditure in 1948 will be for a 60,000-kilowatt steam power station at Quantico, Va. Similarly sized units will be built in 1949 and 1950, the first near Chester, Va., and in the second year, at Bremo Bluff, Va. A 40,000-kilowatt addition will be made to the Norfolk plant in 1951. Each of these steam turbo-generators will be equipped with a single boiler. Two new 250,000-pound per hour boilers will be installed at Norfolk during 1950.

Virginia Electric and Power will make other expenditures for necessary trans-

(*Continued on page* 55)

Associated Industries of Alabama Aims To Show South's Opportunities To Youth

For years, too many graduates of Southern colleges had drifted out of the South towards more attractive opportunities in other sections of the country. As a result, Southern industry had suffered. Many Southern leaders lamented the situation, few had done very much to keep youth at home.

This month one organization was hard at work to bring about a change. Associated Industries of Alabama, through a series of plant visitations and frank discussions with educators and others, is showing that Southern youth does have unequalled opportunity for advancement in Southern industry and that Southern industry needs the talent, the initiative and the loyality of graduate students.

To accomplish this, the AIA has enlisted the aid of the state's leading businessmen, industrialists and educators. Basically, the program is designed to acquaint students, principals and the public with the operations of the American system of free enterprise, its problems, its accomplishments and its objectives.

Groups of school teachers, principals and students have been taken through typical industries. They have been shown how industry produces, how it buys, sells and from whence its profit and losses come. Questions of any nature can be asked. To supply the answers, the organization has on hand business and industrial leaders. The program is in force throughout the state and the state's industries are practically an open book to questions and queries.

President of AIA, John B. Turner, division manager of Arkansas Fuel Oil Co., and vice president, Hugh P. Bigler, Connors Steel Co. plan further revision and expansion of the program as conditions suggest.

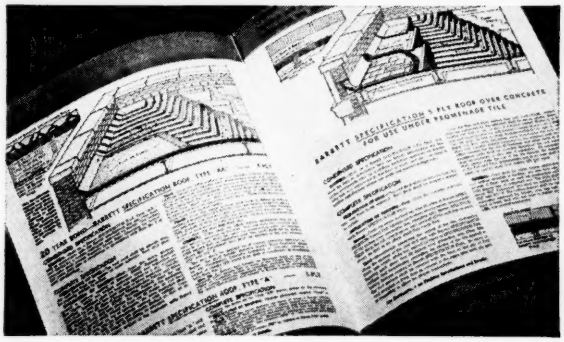
As a means of interesting Southern boys and girls in Southern opportunity the program looked good. As a spokesman for free enterprise, it was, perhaps, even better.

. . . for youth, opportunity was waiting.

Student and teacher listen intently as a member of Associated Industries of Alabama explains a point during a trip through the American Cast Iron Co.

Why the Barrett* SPECIFICATION* Roof

is the toughest, longest-lasting, best-value built-up roof that can be made



BARRETT SPECIFICATIONS, published in Sweet's and also available in the Barrett Reference Manual for Architects and Engineers, stipulate exact quantities and qualities and proved application techniques to produce a uniformly dependable result. They stipulate . . .

PROPER PREPARATION of the roof deck, according to type and incline. They specify the number of plies of Barrett Specification* Felt to be used, the exact quantities of Barrett Specification* Pitch, and precisely how they shall be applied. They also require . . .

A FINAL POURING (not mopping) of Barrett Specification* Pitch into which, while hot, the gravel or slag is firmly embedded. This forms the famous Barrett armored surface which means extra protection against weather, fire and mechanical damage.

YOUR FINAL ASSURANCE of "the finest roof it's possible to build" is the "Section test" made by the Barrett Inspector. This operation provides an unfailing check upon the quantity of materials used and the applicator's adherence to the stipulations of Barrett specifications.

1. *Barrett Specification* Pitch and Felt*
2. **BARRETT APPLICATION METHODS**
3. *The Gravel or Slag Armored Surface*
4. *The Barrett Approved Roofer*

THE SUPERIORITY of the Barrett Specification* Roof is due to the combination of highest-quality roofing materials, the protective surface of gravel or slag, and scientifically standardized application techniques used by Barrett Approved Roofers. The result is a roof so good that it can be bonded against repair and maintenance expense for periods up to 20 years—a roof so good that it regularly outlasts the bonded period by many years.

Barrett* Specification* Roofs

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ALLIED CHEMICAL & DYE CORPORATION
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*Reg. U. S. Pat. Off.

Cost Accounting

(*Continued from page* 38)

makes in advance monthly as close an estimate as is feasible of the total material, the total direct labor and the total indirect overhead expense for each of the production lines. He then calculates the factory cost of each of the many articles produced on that production line by calculating the cost of the materials shown for the particular article by the bills of material and adding to that figure the appropriate percentage for both the direct labor and the indirect overhead expense.

It is hardly possible that the method described in the preceding paragraphs could be used very generally without many modifications, but the writer believes that there are many ways through which the average manufacturer can improve and simplify his cost accounting system, merely by the use of a little thought and ingenuity. There are all too many manufacturers who install or continue to use a conventional cost accounting system without using imagination and ingenuity to see whether some other system may not be better for the particular purpose.

Checks On Productive Efficiency

In the example just given, the furniture manufacturer did sacrifice a valuable by-product of the usual cost accounting system. There is nothing in his system which could help him in checking directly the relative productive efficiency of the various departments for different periods of time. It will be noted, however, that he does make some checks from time to time which help him evaluate this factor, and the very method of operation assists in encouraging a rather high standard of efficiency in the several parts of each production line. Other manufacturers might not be so fortunate in this respect.

While it is very true that cost accounting information can well be used by top management in comparing the efficiency of production for a certain period with that of other periods, or with some standard efficiency, such comparisons are often made in such a way as to lead to unsound conclusions. For example, it is common management practice to compare actual overhead rates with the estimated overhead rates for each department for each accounting period. This is a very desirable practice, but often there is no real understanding of the fact that as a standard for judging efficiency the estimated rates are no better than the estimates upon which these rates are based. All too often, departmental estimated overhead rates are adjusted periodically up or down in accordance with whether the actual rates for the preceding period were higher or lower than the rates which had been estimated for that period. In making such comparisons it is important to judge whether the estimated rates were really reasonable in the light of actual conditions during the period before using these rates as a basis for judging actual operating efficiency during the particular period.

Distribution By Direct Labor

One often hears the statement that the method of distributing indirect overhead expense as a percentage of direct labor is satisfactory only in situations where the actual percentages are nearly the same in various parts of the factory or where different percentages are used in various parts of the factory so as to take care of any differences. The facts are that it is often possible to use a single percentage for an entire factory even though there are wide variations between the actual percentages in various departments or even in different parts of the same department. The southern furniture manufacturing industry offers a good example.

There could hardly be greater differences between actual indirect overhead expense rates than is found in the several departments of the average furniture manufacturer. There are the very high indirect overhead expense rates of certain operations in the machine room and the much lower indirect overhead expense rates of certain other operations in the cabinet room and in the finishing room. Nevertheless, it is perfectly satisfactory in most cases to use an average rate for the entire factory because for practically every article produced there is about the same proportion of total cost in each of the several departments. It would be quite a different matter if, for example, some of the articles produced in the machine room were sold as repair parts. An average overall rate would obviously be improper if it were necessary to cost individual parts, either for direct sale as parts or for assembly in different proportions in finished articles. In such cases it might be desirable to have a number of different rates in the machine room itself, or, in other words, to use what amounts to the machine rate method.

The writer believes that most members of the southern furniture industry distribute indirect overhead expense as a percentage of direct labor, and he also believes that this is probably the best method under their operating conditions, all things considered. Their use of the single overall rate for the entire plant is made more accurate and more logical by an operating practice which seems strange to one not familiar with the operations of this industry, and which is used primarily to simplify production control and to reduce process inventories rather than to make cost accounting simpler.

Under this operating practice, furniture is manufactured in fairly large lots with typical mass production methods, but no attempt is made to manufacture such items as drawer sides, backs and bottoms in larger lots than is needed for the single lot in which they are to be used, although they could easily be made interchangeable with the same items of other lots and manufactured in extremely large quantities. To increase the quantities would certainly decrease the manufacturing cost of these and other similar items, but would involve much more complicated production control and greater process inventories, to say nothing of more complicated cost accounting. After having made some little study of this particular problem, the writer believes that in the long run the practice of the industry is a desirable one. He wonders whether a somewhat similar practice might not be used in other industries which are now making a very large number of separate parts and then assembling some of these parts into various products, while selling others separately as repair parts. The economic lot size problem, which was discussed some months ago in a series in this magazine, is certainly much simplified when this practice of the furniture industry can be followed without too greatly increasing manufacturing costs.

Distribution By Machine Rate

It is often claimed that the machine rate method of distributing indirect overhead expense is the most accurate method, and also the most logical method

(*Continued on page* 56)

Kentucky Cuts Tax Burden $2.5 Million In Big Assist to Industrial Development

The Blue Grass Commonwealth of Kentucky looked even more inviting to prospective new industries this month. In a move to improve the business climate of the state, the General Assembly slashed an estimated $2.5 million from Kentucky's tax burden.

Topping the list were two impressive modifications. One cut exactly in half—from 50 cents to 25 cents—the tax on intangibles. The other involved a substantial reduction in inheritance tax rates.

Largely responsible for the tax reductions was Earl R. Muir, president of the newly-formed state chamber of commerce, who, with the backing of numerous state and local trade and commercial organizations, led moves to adopt the important tax modifications.

Other chamber-proposed measures met with like success. An Agricultural and Industrial Development Board for all-over state research and planning was given legislative approval by Governor Earle C. Clements. A State Department of Economic Security, unifying the State Employment Service and Unemployment Compensation Commission, was set up. Tabulation of the State's ground water resources has just been made possible through legislative action establishing a Flood Control and Water Resources Board, more chamber backed legislation.

Power Round-up

(*Continued from page* 52)

mission and distribution lines and substations to connect the various stations with the components of the company's system. One of the major projects is a 110-kilovolt line being built from the new Possum Point power station at Quantico to terminate near Falls Church, where power will be stepped down to 22-kilovolts to serve several distribution substations in the area west of Alexandria, Va., will cost $500,000.

Carolina Power & Light Company's four-year construction program involves expenditures of $25,000,000. Included is an outlay of close to $1,000,000 for a 110,000-volt substation in West Asheville and a 110,000-volt line from Canton to Asheville. Construction will probably be completed in 1949. The company now has the units for a new steam electric generating station on order. Site for the new plant has not been selected, but its general location will be in the company's eastern territory.

Duke Power Co. is constructing a two-unit addition to its Cliffside steam-electric generating plant on the Broad River, near Shelby. Each of the two new generating units will have a rated capacity of 65,000 kilowatts and will operate at 1,250 pounds pressure and 950 degrees Fahrenheit at the turbine throttle. The generators will be hydrogen cooled and the units will operate at 3,600 revolutions a minute. Energy will be generated at 13,000 volts, stepped up to 44,000 and 100,000 volts and delivered to the transmission network serving the Piedmont sections of North and South Carolina.

South Carolina Electric & Gas Co., Columbia, has applied to the Federal Power Commission for permission to construct a hydroelectric plant on the Saluda River. The proposed construction would include a concrete dam with gated spillway and a concrete power house equipped with three generating units. Proposed installed capacity would be 20,000 or 26,810 horsepower.

Contemplated expenditures of the Consolidated Gas, Electric Light and Power Co., Baltimore, in 1948 total $19,000,000 including completion of the Riverside electric generating station addition, the start of work on a new 60,000-kilowatt generating unit at the Westport power plant and completion of several substations and further extension of electric and gas distribution systems.

That Baltimore company's 1947 program involved expenditures of nearly $14,000,000 for new construction. Work continued throughout the year on the Riverside plant addition, where a third 60,000-kilowatt unit is expected to be placed in operation this year. Four new substations were completed; several others expanded. A new gas holder of 5,000,000-cubic foot capacity was practically finished and additional gas manufacturing equipment installed. Electric and gas distribution systems were expanded.

The company has privately placed a $15,000,000 three per cent first refunding mortgage sinking fund bond issue with the New York Life Insurance Co. Proceeds of the issue, which will be due in 1979, will be applied toward the Consolidated's 1948-1949 construction program.

First unit of the Industrial Canal steam electric plant of New Orleans Public Service Co. was put in operation last year. Initial unit of four to be installed there, the new plant cost $7,910,000. Ultimate cost is placed around $21,000,000, with the completed station containing four generators driven by steam turbines, operating on high pressure steam produced by natural gas from Louisiana fields. Rated generating capacity will be $160,000 kilowatts, or almost double the present output.

Mississippi Power & Light Co., Jackson, will finish its $4,500,000 Rex Brown steam electric station this year. The initial installation will consist of one 30,000-kilowatt turbo-generator unit. Design will permit future installation of additional units. Natural gas will be used as fuel, with the additional provision that oil can also be utilized.

Arkansas-Missouri Power Co. is starting on a $5,000,000 power plant at St. Francis, Ark., the "load center" of that company's territory. Initial capacity will be 30,000 kilowatts, a capacity that is expected to meet power requirements of the area for many years to come. More than a million dollars is being spent also for high voltage transmission lines.

Severe Gulf storms are taken in stride by this durable ARMCO PIONEER Building located on the Mississippi coast.

"Stormy Weather" is just a song to owners of ARMCO PIONEER Steel Buildings. They know that these sturdy structures stay tight and dry under the worst weather conditions.

The all-metal framework of an ARMCO PIONEER Building is designed to withstand high wind velocities. Continuing weathertightness is assured because the corrugated metal siding and roofing is generously lapped and securely fastened. A heavy galvanized coating guards against corrosion.

Although mass-produced for utmost economy ARMCO PIONEER Buildings are readily adaptable to individual requirements. You can specify any length you need, with clear span width from 20 to 100 feet and heights up to 24 feet. Doors, windows and ventilators may be placed almost anywhere. Interior partitions, wiring, plumbing and other special details are handled the same as for any other structure.

PIONEER Buildings are speedily erected by a trained ARMCO crew. All you need is the foundation and we'll help design that, if you desire. Write for complete data and see for yourself why ARMCO PIONEER Steel Buildings are the efficient, low-cost answer to your building problem.

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ARMCO PIONEER STEEL BUILDINGS

Cost Accounting

(*Continued from page 54*)

to use where the machines may be considered to be responsible for a considerable part of the indirect overhead expense. This sounds plausible, and when properly handled the machine rate method is certainly as good a method as any. However, it would seem that for most companies the direct labor method would be just as good if as many rates were used as would be needed with the machine rate method, and if these rates were as carefully selected. One thing which is often overlooked is the fact that the accuracy of the machine rate depends not only on the accuracy of the estimate of total indirect overhead expense for the particular machine for the month or year but also on the accuracy of the estimate of the number of hours the machine will operate during that period. This limitation applies to all methods; no method is more accurate than the estimates on which it is based.

Predetermined and Standard Costs

Limitations of space prevent any real discussion of those fascinating and, by usual definitions, somewhat different cost accounting methods called predetermined costs and standard costs. It can be said quite definitely that each is an attempt to make as scientific a solution as is possible of a most important problem which is inherently indeterminate. There is good reason to suspect that many managers have refused to make careful studies of these methods because they realize this inherent indeterminateness. This is a short-sighted attitude. There is no better way to prepare oneself to select the best cost accounting system for one's own operating conditions than to make a careful study of various proposals that have been published by the advocates of these methods.

Job Order Costs and Process Costs

While there are many variations in the way each type is handled, it is possible to classify most cost accounting systems in the manufacturing industries into two main types, which are generally called job order costs and process costs. Generally speaking, job order costs are used where there are clearly distinguishable lots and it is practicable to keep a separate record of each lot during the period of manufacture. On the other hand, process costs are apt to be used in plants producing products whose nature is such that it is not practicable nor even necessary to identify lots or to keep them separate. Flour mills, cement mills, and most plants in the heavy chemical industries typify industries in which it is almost necessary to use process costs. In addition, there are a number of industries in which job order costs could be used if desired but where process costs are used because of some reason it is simpler and more economical to do so. Because of necessity, if for no other reason, job order costs are used in the great majority of manufacturing plants, and the discussion of cost accounting in this series of articles has been restricted almost completely to job order costs, although much of the general discussion can be made to apply to process cost systems.

The principal purpose of this series of articles has been to point out that the results of cost accounting systems and methods are valid only for the particular purposes for which the systems are designed, and are indeterminate even for those purposes; also to call attention to the fact that top management is inclined to place too much reliance on the figures obtained from cost accounting systems. The writer is convinced that few problems are as badly handled by the average top executive as the cost accounting problem.

Paper From Cotton Gets Government Support

King Cotton seems ready to be the basis for still another if not exactly new industry.

To stimulate the making of writing paper from cotton the federal government announced recently that a subsidy of two cents a pound would be granted on the raw material used by the paper mills in order to encourage the industry.

The venture is an important one for the South as it will be a source of consumption for low grades which are of little or no value to spinners but which will do quite as well as better grades for the paper makers.

Immediate Delivery
FROM STOCK
GREAVES-SILENT BAKELITE GEARS

No waiting when you order Greaves Silent Bakelite Gears. • We have them in stock NOW! • Your order will go forward immediately. • You'll appreciate the silent operation and added smoothness provided by Greaves Silent Bakelite Gears. • You'll marvel at their great strength to carry big power loads . . . their remarkable ability to successfully operate completely submerged in water. • You'll welcome their low cost. • No metal reinforcements required. • Save Time . . . Money . . . Labor!

We also make silent gears of rawhide and Fabroil.

Write for Circular.

FOR CONCERNS CUTTING THEIR OWN GEARS, WE CAN MAKE IMMEDIATE DELIVERY ON BLANKS SAWED TO SPECIFIED DIAMETER AND FACE

Greaves MACHINE TOOL CO.
2017 Eastern Ave.
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Georgia Feature

THE May 1948 issue of the MANUFACTURERS RECORD will feature the State of Georgia . . . a comprehensive, beautifully illustrated article of approximately 50 pages —covering manufacturing output, mineral resources and production, agriculture, industrial opportunities, taxes and finance and other factors that make up a states economy.

You will surely want this important issue —not only for immediate reading but for future reference. The supply is limited so we urge you to place your order now for the number of copies you will need.

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Annual Subscription $3.00

SEND US YOUR ORDER TODAY.

MANUFACTURERS RECORD
BALTIMORE 3, MARYLAND

LETTERS

March 18, 1948
Birmingham, Ala.

Editor:

Your chart accompanying your 1948 *Blue Book of Southern Progress* is most interesting. Would it be feasible to let us have a dozen additional copies? I think we could use them to great advantage in acquainting the public with just what industry means to a community.

Your *Blue Book* is most important to all of us, and I extend to you my congratulations again on the thorough manner in which it is prepared, and the excellent way in which it is presented.

Yours sincerely,
Thomas Martin
Alabama Power Co.

February 12, 1948
Birmingham, Ala.

Editor:

For some reason, the May (1947) issue of the MANUFACTURERS RECORD was misplaced in my office . . . at your convenience, I would appreciate a marked copy so that I can read the speech that Mr. Frank Gould made at Biloxi, before the Southern Gas Association.

I am reading with a great deal of interest and profit the editorials in the RECORD and also enjoy the well prepared and well illustrated articles that your staff arranges for each issue. . . .

Most sincerely,
Hollis Bush

February 26, 1948
El Dorado, Ark.

Editor:

My attention was called, on last evening, to your August, 1947, MANUFACTURERS RECORD; Dr. Soady, head of the research division of the Lion Oil Co., made references to this issue in an address which he delivered before a group of about one hundred business and professional people. This is the Arkansas Issue. . . .

I am sure that the publicity which you gave this state in that issue will result in a great deal of good to the state, consequently as one citizen of the state, I want to express to you my sincere appreciation for the issue.

Cordially yours,
R. B. Wilson, Treasurer
J. F. Sample Co.

With Industry Expanding, The South's Growth Is Dynamic!

Read the Record and keep informed of Southern progress

$3.00 per year.

January 26, 1948
Hamburg, Germany

Editor:

Before the war I maintained good business relations with a number of American manufacturers. All business records with these firms and my buying card-index were lost as a cause of war.

I am about to take up relations again with American manufacturers who are interested to export to Germany, so as to be able to give orders immediately after the currency problem has been solved. A good business is generally expected especially for American manufacturers in rebuilding Germany.

Therefore I should be much obliged to you if you would give notice to the readers of your magazine in a suitable manner, that I am interested in import of American goods. If possible, I kindly beg to cause them to send descriptive matters of their products with the best prices FOB New York.

There would be in question for my department:

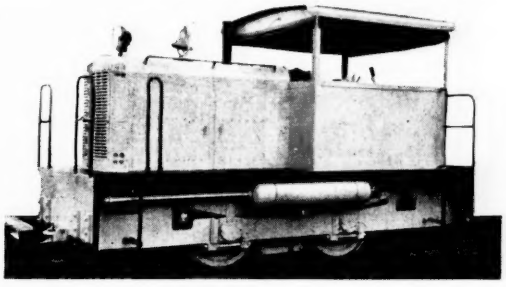
1) Metal and woodworking machinery, machine tools, supplies and equipment for factories.

I should also be glad to receive copies of the latest publications of your magazine.

Hoping you can comply with my wishes, and thanking you in advance, for your kindness, I remain

Very truly yours,
Erich Strücker.

℞ PRESCRIPTION FOR LOCOMOTIVE SATISFACTION



You'll find Whitcomb locomotives—just what the Doctor ordered. They are designed for years of dependable service and lasting satisfaction. The operating and maintenance costs will be much lower than you would reasonably expect and they will be available for operation near 100% of every 24 hours.

So if your haulage problems concern locomotives up to 95 tons, better consult with Whitcomb engineers. Let them prescribe a sure cure for your transportation worries. They are just as eager to find the right answers to your motive power equipment problems as you are.

Write for bulletins illustrating and describing Whitcomb Locomotives, both Diesel electric and Diesel mechanical models from 3 to 80 tons.

BLW THE BALDWIN GROUP

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Subsidiary of THE BALDWIN LOCOMOTIVE WORKS

First Post War Textile Exposition To Attract Southern Textile Men

America's first post-war Exposition of Textile Machinery, Equipment & Supplies will be held in New York City in the 71st Regiment Armory, 34th Street and Park Ave., the week of May 3 to 7.

The top personnel in every textile mill throughout the United States is being invited to attend this trade show and invitations are being sent to them during the coming weeks. The Management of the Exposition states that they will fill all requests for tickets if stamped envelopes are sent to the Executive Offices of the Management, at 36 West 47th St., Suite 205.

A feature of the Exposition, which marks a new departure in expositions of this character, will be a series of forums that will be held during the week of the show under the auspices of a committee of textile men. The subjects that will be discussed at the forums embrace the following: Carding & Spinning Machinery; Weaving & Braiding Machinery; Knitting Machinery; Dyeing, Finishing & Printing Machinery; Testing and Miscellaneous Machinery.

Arrangements have been made to accommodate the visitors to the Exposition, with the cooperation of the New York Hotel Men's Association and the New York Convention Bureau and all the leading hotels have set aside rooms to accommodate visitors to the show.

The audience will embrace textile men interested in all fibers and a very large contingent from the South is expected to augment the mill men from the East and other sections of the country. Over 250 requests for tickets have been received from textile mill men in foreign countries who are coming to the Exposition.

Hours of the show have been set from 2 P.M. to 10 P.M. daily. The Hon. Mayor O'Dwyer of the City of New York is expected to open the Exposition on Monday, May 3rd, at 2 o'clock. The show will close on Friday, May 7th, at 10 P.M. Official headquarters for the show will be at the Hotel Vanderbilt, directly opposite the Exposition Hall, where many of the visitors to the show are going to stay.

Arthur Tarshis, Exposition Manager, said that the large roster of exhibitors clearly indicates the need for an exposition of this nature and said that plans are being made to hold the show every year in New York and in this manner provide the opportunity to those making new products to display them before the eyes of all in the industry who are interested in new ideas in the production of textiles. The 1949 show, he said, will be held about the same time and in the same location.

Alabama Power Co. Renews Coal Gasification Tests

A new source of industrial energy for the Southeast moved nearer to reality recently with the announcement by the Alabama Power Company that experiments relating to the underground gasification of coal at the company's Gorgas Mine would be renewed.

Under arrangement with the United States Bureau of Mines, the Power Company would place at the disposal of the federal agency that part of its coal properties on which the experiment would be conducted.

Earlier experiments in 1947 gave promise of great possibilities said company president Thomas Martin.

To Milton H. Fies, company engineer, and W. C. Schroeder, chief of the office of Synthetic Liquid Fuels of the Bureau of Mines, the prospects looked so good that "experimentation should no longer be delayed."

Under the plan, the Bureau of Mines would spend $350,000 to $500,000 on the experiment. Mine personnel of the Alabama Power Company and of the Southern Research Institute would work with government scientists assigned to the project.

If successful the experiment should make available a low-cost, convenient source of energy. An economical method of gasifying unmined coal would mean much to Alabama and to the South.

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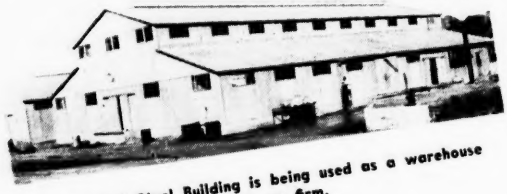

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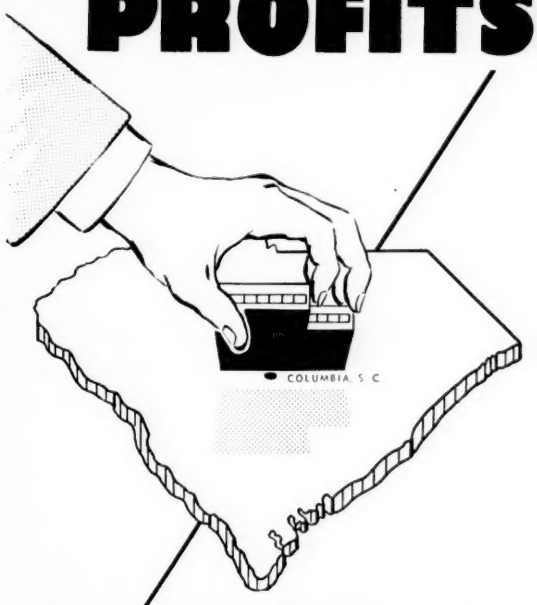

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Conveyor System

(Continued from page 39)

from the fact that each of the two storage piles contain about 60,000 tons of rock, or enough to keep the new plant operating during the months when ice in Canadian waters prevents passage of the ships that bring the mineral from mines in Nova Scotia.

The vessels are unloaded within a period of about three days. This is accomplished by a Robins unloading tower that operates on 30-foot wide tracks. After one hold is scraped clean by the grab bucket, the tower is moved to the next hold, and repeats the procedure of scooping up the rock, and discharging into the hopper that delivers to the conveyor system for either distribution to storage or directly to the milling process.

Conveyors Used

Transportation from step to step in actual manufacture is also by conveyors. These run from the first crusher, where the outside system meets with the inside, then to the Harding drier, where the moisture is removed to facilitate the secondary crushing and subsequent operations and to the five Raymond mills, which grind the gypsum to fine particles with much the same feel as flour.

A change in the type of conveyors, however, occurs at this point. Screw conveyors replace the belts. Dust-tight, these screw conveyors push the fine gypsum forward to the bins where it is stored preliminary to the manufacture of the board or lath or to additional treatment in the tube mill. Here 250 steel balls pound the round particles to flake form to insure better cohesion in the plaster.

Prior to storage in the silos or to plaster making, the gypsum is, in effect, weighed and if found wanting, returned to the Raymond mills for additional grinding. During the cycle, Cyclone units throw out the heavy particles by centrifugal force. Precipitators extract the dust from the air electrostatically. Calcining follows in oil-fired vessels called kettles. No fire touches the gypsum, but temperatures reach 450 degrees.

Plaster, mixed according to specifications, is dropped from 450-ton bins to the St. Regis bagging machines. There are four of these. The bag is slipped on a spout, which pours 94 pounds into the specially designed paper bag. When the bag is filled to the proper point, it automatically closes and is leakproof. Capacity of each unit will depend on the operator. Industrial trucks handle the filled bags.

Manufacture of the board and lath is done in a 775-foot long structure known as the board plant. First step in the process is the beating of paper, starch, ammonium sulphate and water into one solution. Second step is mixture of 12 tons of gypsum and 2,000 gallons of water an hour. These are fed together onto the board machine.

Foam Added

As the slurry—the name for the two—is whirled unto the bed of the machine, a mixture known as foam is added to help decrease its weight. Yellow in color and resembling the custard in lemon pie, this foam is made up of resin, soybeans, lime and several other ingredients. The resultant tri-mixture moves slowly in a shallow trough-like conveyor and is sandwiched between two sheets of paper.

One of the paper layers arrives horizontally. The other rolls down from above. Width of the upper layer is several inches less than that of the lower. As the plaster lath or board, as the case may be, is pushed along the machine bed, the wide, lower sheet is folded up and glued to the upper sheet, thus enclosing the gypsum filler. Three widths of lath are made on the machine simultaneously. The rolls of paper weigh from one-half ton to several tons. Their handling is effected by overhead cranes.

Pushed along on a belt from the drums at the mixing point, the one-quarter to three-eighths inch thick gypsum lath or board is picked up by the live rolls of a conveyor as it reaches the cutting operation. Its speed is such that it has dried sufficiently for an Ersham knife to cut it into the required lengths. In the case of lath, a cut is made every eight feet, with a score in between each. A cam regulates the operation.

Automatic Feeding

The short lengths of gypsum are then transferred at right angles to line up with the kiln-like drier, which parallels the board bed and with the short shift-conveyor forms a long narrow U layout. The gypsum lath or board is fed automatically into the eight levels of the drier. This resembles a baker feeding pastry into the racks of an oven, without the baker.

A conveyor—the rolls are drawn by a long sprocket chain—moves the gypsum slabs through the drier about one-sixteenth the 95-foot a minute speed up to the shift point. Coils heated with steam of 365 degrees finished at 250 pounds pressure dry the board on its one hour and 15 minute trip through the hot chamber. Fans flow off the moisture as it steams through outlets in the roof.

Leaving the drier, the gypsum board or lath rolls move along to a cooling ramp and then to the breaker. This is a dip in the conveyor bed. Its purpose, in the case of the lath, is to break the eight-foot lengths into the four-foot lengths at the score. Fourteen inches wide, these lengths of fireproof Gold Bond gypsum lath move to an automatic take-off, where they are transferred to the bundler and taped six to the package.

About 20 men work on the board machine and drier which extends twice the length of the big board building. They work at the mixing operations, at the cutter and at the discharge end, where the bundles are piled on skids and moved to storage by Yale and Ewell-Parker industrial trucks. The entire plant employs about 174 workers.

Plant Designed

The plant was designed by engineers of the National Gypsum Company supervised by D. F. Hunt, chief engineer and S. D. Skinner, assistant chief engineer, and Hall, Turpin and Wachter, consultants of Baltimore. General contractors were Baltimore Contractors, Inc., of Baltimore, headed by Victor Frenkil. American Bridge Company furnished the structural steel, including large bins.

Combustion Engineering Co. installed the boiler unit with its 60,000 pound per hour 400-pound pressure capacity. Other equipment includes an A. F. Smith tube mill, Pennsylvania crushers, Sly and Cyclone dust collectors and Koppers precipitator, St. Regis bagging machines.

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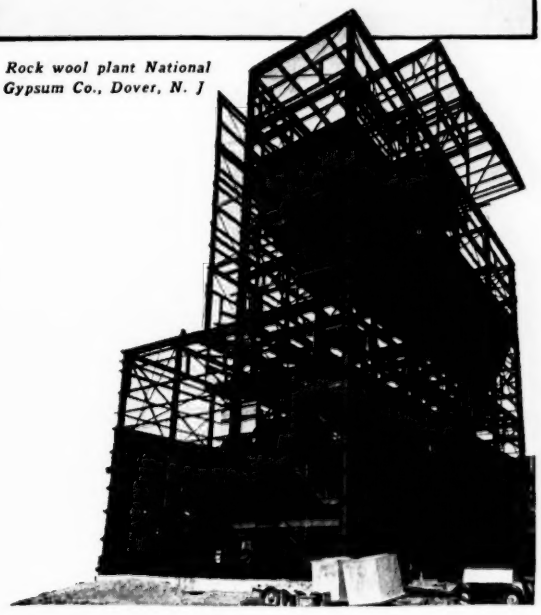

Rock wool plant National Gypsum Co., Dover, N. J

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I-29

Trade Literature

Burning System Catalog

Schutte and Koerting Co., 12th and Thompson Sts., Philadelphia 22, Pa., announce a three color 8-page bulletin on mechanical fuel oil burners used for operating steam boilers in industrial and power plants. Photographs, text and drawings describe the burners, together with general information on their construction and operation.

Tables, drawings and charts give comprehensive data on dimensions, pressure capacities and weights of the various burners, forced and natural draft air control registers. Pumping systems for fuel oil burners are also described. Photographs show typical applications of the burners in hotels, industrial plants and a large utility.

DI-ARCO Catalog

A forty page DI-ARCO catalog recently came off the press. The booklet contains illustrations and specifications of all the company's precision machines which are now available in six different types and a total of eighteen different sizes.

The catalog is full of charts, drawings and photographs, and may be obtained by writing the company's home office.

Otis Elevator Manual

A descriptive folder on "Pow-R-Truck" elevators, engineered, for use with materials handling equipment, is now available from Otis Elevator Co., 260 Eleventh Ave., New York 1.

The eight page illustrated booklet points out that freight elevators must be especially designed to stand up under the severe forces caused by industrial power truck loading, where the truck itself may weigh 8,000 pounds or more, compared with a hand truck weighing about 500 pounds.

The relatively small pay loads of hand trucks, according to Otis, are pulled into elevators and distributed by hand, which permits gradual car loading. In contrast, a power truck with its speed and proportionally heavier pay load, brings up problems of impact loading, off balance loading, and extra static of concentrated loading.

Allis-Chalmers Equipment

Equipment for the oil industry, built in a maximum range of types and sizes, is described in a 20-page bulletin released by the Allis-Chalmers Manufacturing Co., Milwaukee, Wis.

Products covered include texrope power transmission equipment, drilling rigs, electric motors, motor controls, transformers, unit substations, generators, shale shakers, blowers, compressors, and centrifugal pumps.

Described and portrayed are the three types of power units for oil drilling rigs built by Allis-Chalmers. These are texrope driven mechancial rigs, electric-mechanical and d-c full-electric rigs. Also featured is the company's line of totally enclosed fan-cooled motors in sizes up to 2,000 hp engineered to meet the particular needs of pipe line companies and oil refineries.

Allis-Chalmers employs specialized engineers who check every oil industry installation carefully, the bulletin points out.

Fire and Fume Control Booklet

A 16-page illustrated booklet on "The Exhaust-Water Spray Fire Protective System for Wellways," which describes in detail this new method of combatting the spread of fire and fumes through burning buildings, has been published jointly by Otis Elevator Co., Westinghouse Electric Corp., and Grinnel Co., Inc.

The three firms cooperated in developing the technique, using an exhaust system and curtain of water, and in staging demonstrations this past year before fire prevention experts, construction engineers, department store executives, fire chiefs, and municipal building authorities, as well as a group of newspaper and magazine editors and writers from many sections of the country.

The booklet points out that principal killing agents accompanying fires in buildings are super-heated air and toxic gases. Unless adequately protected, elevator hoistways and the wellways of moving stairways provide an ideal means for the rapid spread of flames and toxic fire gases.

Welding Bulletin

Welding Products Bulletin 1047-W, released by the American Manganese Steel Division of American Brake Shoe Co., Chicago Heights, Ill., is a complete treatise on how to keep equipment of all types operating and producing through Amsco conservation welding. Twenty-eight pages of photographs, drawings, and descriptions explain the low-cost method of keeping hard-to-get parts out of the scrap pile by repairing, rebuilding, reclaiming, and hardsurfacing with Amsco welding rods and electrodes.

Die Handler Booklet

Heavy duty die handling trucks at work in metal stamping and forging plants are described and illustrated in a ten-page booklet issued by The Elwell-Parker Electric Co., Cleveland, Ohio.

Action photos in automotive, aircraft and other equipment shops reveal how effectively a truck operator manipulates dies weighing 50,000 pounds or more. Facts are given relating to speed and economies with which trucks move dies in and out of storage departments, place them in operating position on press beds, or interchange them. For example, in an automobile body stamping plant sequence pictures show a 17-ton die pulled from a press by one man, the truck's operator, in ten minutes after the die has been unbolted.

Wire Rope Handbook

The Wire Rope Institute, a national organization with a membership representing most of the country's wire rope manufacturers, has recently published an attractive, 2-color combination catalog and handbook for general distribution to wire rope users.

This 119-page publication, "Wire Rope," prepared and edited by the Institute's Technical Committee, contains a wealth of useful information in the selecting, buying and using of wire rope, along with data on fittings attachments, splicing, and other related subjects.

Fuse Booklet

Read "How the High-Interrupting-Capacity Fuses Provide Short Circuit Protection" in Publication 192, 8-page booklet showing construction, operation and application of "Hi-Fuse" combination starter for high-voltage induction and synchronous motors for industry, published by Electric Machinery Manufacturing Co., Minneapolis 13, Minn.

Boice-Crane Brochure

A brochure describing the Boice-Crane Company's 14-inch band saw, is being made available to anyone addressing the manufacturer at 949 W. Central Ave., Toledo 6, Ohio. Filled with pertinent facts regarding the various models and accessories, this interesting folder fully describes and illustrates this popular saw.

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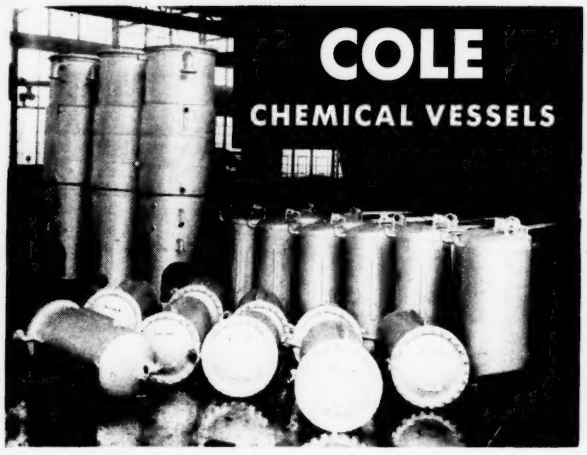

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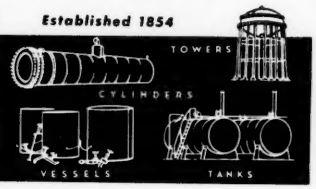

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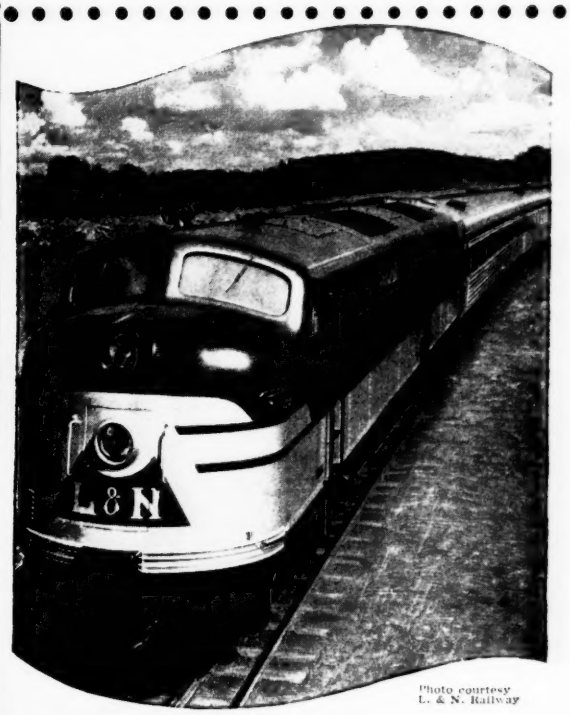

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Robert S. Byfield

(*Continued from page 23*)

were being forced lower and lower. Federal budgetary deficits were in contrast to present day surpluses.

In addition to development overseas, the course of the speculative securities markets will depend to some extent on whether or not personal tax relief is granted by Congress this year. One of the greatest deterrents to investment has been the highly progressive surtax rates imposed upon those individuals who ordinarily would invest their savings in common stocks. Current high yields from many sound securities are not tempting to the investor who must pay the bulk of his income to the Federal tax collector.

There are, naturally, some groups of stocks which appear to be more attractive than others. Regardless of the degree and rapidity of rearmament the oil stocks, particularly those of producing companies, should continue to command public interest. This observation also holds true with respect to companies with large and readily available reserves of natural gas, and some of the pipe line companies which are expanding their capacity to supply the ever-growing demand for this type of fuel. For many obvious reasons, including the fact that Government stockpiling activities have not made much progress, the shares of some of the copper companies seem attractive. Oddly enough, another quite different group of stocks which appears to be scraping bottom is the electric utilities. The large construction program previously referred to will provide many of these companies with modern plants and will enable them to effect large economies in the consumption of fuel. In this respect, certain companies using natural gas for boiler fuel have an undoubted advantage over those using coal. Fuel costs and salaries have been mounting steadily for the past 18 months and increased expenses have eaten up practically all of the gain in gross revenues which the utilities have enjoyed. However, if a halt is finally in sight to the inflationary aspects of the business situation, growing utility revenues may again at some future point outrun increases in expenses. In the meantime, the shares of many companies are affording 7% to 8% yields from dividends which are well covered by earnings.

Seaboard Earnings High In 1947

For the Seaboard Air Line Railroad Co. 1947 had been a good year.

Ending the first full calendar year of operation under the present company, the road reported surplus net income of $2,918,617 after fixed and contingent charges.

To stockholders this was equal, after preferred dividend requirements, to $2.55 a share on common stock.

Chiefly responsible for the high earnings were the largest freight revenues of any year in the Seaboard's history. Representing 80 percent of total operating revenues, the income from freight reflected the high level of business activity and increased freight rates.

As for the future, President Legh R. Powell, Jr., said:

"Present prospects for traffic in 1948 are favorable. However, there remains the fundamental question as to what will be the effect on general business conditions if the present continuing spiralling of wages and production costs is not halted. To the extent that these inflationary forces adversely affect our national economy, all business, including that of the railroads will be affected."

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COMING EVENTS

APRIL—

5-8—Southern Machinery and Metals Exposition, Third Annual, Municipal Auditorium, Atlanta, Ga.

5-8—National Association of Corrosion Engineers, 1948 conference and exposition, Hotel Jefferson, St. Louis, Mo.

7-9—American Gas Association, Annual Spring Sales Conference, Windsor, Ontario, Canada.

7-9—Southern Pine Association, 33rd Annual Meeting, Roosevelt Hotel, New Orleans, La.

15-16—Mississippi Valley World Trade Conference, Third Annual Meeting, New Orleans, La.

19-21—American Society of Lubrication Engineers, Third Annual Convention and Exhibit, Hotel Statler, Buffalo, N. Y.

19-23—American Chemical Society, 113th National Meeting, general headquarters, Stevens Hotel, Chicago, Ill.

26-28—American Mining Congress, 1948 Coal Convention, Cincinnati, Ohio.

26-29—American Management Association Conference on Packaging to run concurrently with the Association's 17th Annual Packaging Exposition, Cleveland, Ohio.

MAY—

3-7—American Foundrymen's Association, 1948 Foundry Congress and Show, Convention Hall, Philadelphia, Pa.

5-7—Cotton Manufacturers Association of Georgia, 1948 Convention, Sheraton Plaza and Princess Issena Hotels, Daytona Beach, Fla.

13-14—American Management Association, Production Conference, Palmer House, Chicago, Ill.

27-29—Tufted Textile Manufacturers Association, Third National Convention, Sheraton Plaza Hotel, Daytona Beach, Fla.

JULY—

22-24—Cotton Research Congress, Ninth Annual Meeting, Dallas, Tex.

Tennessee Railroad To Import Iron Ore

Through president Robert Gregg, the Tennessee Coal, Iron & Railroad Company announced recently that to assure itself an adequate supply of iron ore, it would import a "considerable quantity" of high metallic ore from Brazil and Sweden.

This did not mean that local resources had been exhausted. Instead, it meant that demand for steel had reached an unprecedented high. To the South's ever expanding steel industry, this was good news.

Said president Gregg:

"The step does not mean that local resources are insufficient for our needs. We find that through the use of ore richer in iron content to augment the lower-grade local ore, we can raise our steel ingot production and better serve our customers."

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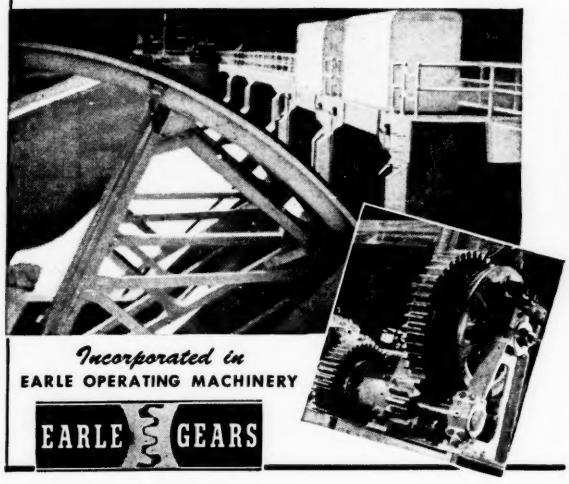

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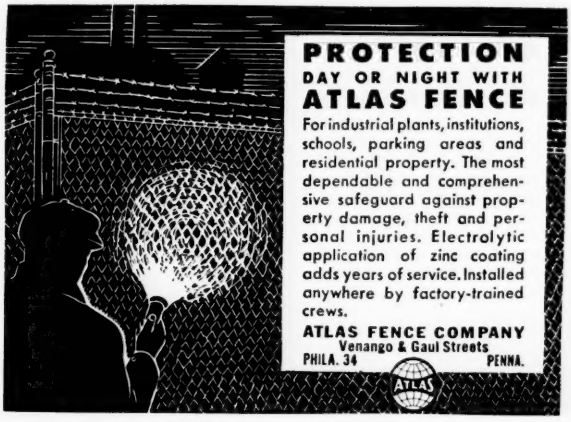

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DAY OR NIGHT WITH
ATLAS FENCE

For industrial plants, institutions, schools, parking areas and residential property. The most dependable and comprehensive safeguard against property damage, theft and personal injuries. Electrolytic application of zinc coating adds years of service. Installed anywhere by factory-trained crews.

ATLAS FENCE COMPANY
Venango & Gaul Streets
PHILA. 34 PENNA.

Business Notes

Kerrigan Iron Works, Inc., of Nashville, Tenn., manufacturers of Weldforged Grating & Stair Treads and Pressforged Pole Line hardware, has announced a change of address of their New York office. From 101 Park Ave., they have moved to larger quarters at 299 Madison Ave. Telephone number is: Vanderbilt 6-4580.

* * *

Two prominent Southerners have established a new advertising agency in Atlanta, Ga. They are: Robert C. Lowe, Jr. formerly assistant advertising manager of the Georgia Power Company, Atlanta, and John H. Stevens, formerly advertising manager of Auto Ventshade Company, Atlanta. The new business to be known as **Lowe & Stevens,** is located at 697 Spring Street, N. W., Atlanta, Ga.

* * *

Bethlehem Steel Corporation has announced that 1947 net income reached $51,088,375. Dividends paid amounted to $24,447,173.

* * *

In its annual report to stockholders, **Fairbanks, Morse & Co.** reported 1947 net sales of $89,563,599, largest peacetime volume in the company's history. Net profit for the year after taxes was $4,224,777 or $7.05 per common share as compared with $5.14 per share in 1947.

* * *

The American Rolling Mill Co. of Middletown, Ohio, listed its 1947 income as $25,002,211, a $7,000,000 increase over 1946. Dividend payments in 1947 amounted to $7,380,755.

* * *

The Southern States Iron Roofing Company, of Savannah Ga., issued a statement that its mail order division was being eliminated in order to better serve its customers through its dealers. The company will convert its mail order list of more than 1,200,000 into a direct mail service for the use of its 5,000 dealers.

* * *

Alabama Power Company will receive the Thomas W. Martin Award, given annually by the Edison Electric Institute in recognition of the electric company operating in the United States making the greatest contribution to rural electrification and agricultural progress each year. This is the second time the company has won the award.

* * *

SKF Industries, Inc., has announced that its branch office at Charlotte, N. C., will become district headquarters and will embrace North and South Carolina, southern Virginia, eastern Tennessee and two counties in northern Georgia.

Textile Industry Healthy Says Georgia Manufacturer

For textile men harboring a feeling of apprehension for the future of the industry, reassuring words recently came from W. D. Anderson, chairman of the board of the Bibb Manufacturing Co. of Macon, Ga.

The cotton textile industry said Mr. Anderson is in a strong position in spite of erratic commodity markets and general feeling among many people that there is bound to be a general slump.

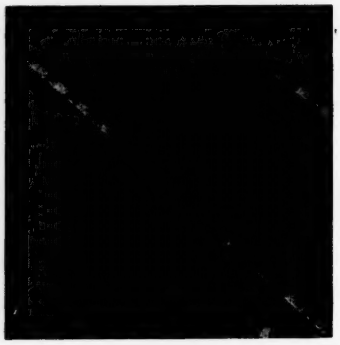
To strengthen his contention the Macon manufacturer pointed to mills which are "going full tilt" and to the difficulty of buying cotton. To Mr. Anderson there was yet no reason for the industry to get the jitters. The demand for cotton products would continue strong and the real problem would be one of a sufficient supply of goods.

He stated that orders were continuing to pour into his mills despite breaks in commodity prices and a general undertone of uneasiness in some industries.

More important, he said that a large amount of business was put on the books without having to cut prices to do it.

For some of the uneasiness in the industry, Mr. Anderson blamed the "propaganda factories," those economic "experts" who believe that the high costs of living can be reduced only through a slump in business.

Cotton reserves are lower, than they have been in many years, he continued, and there is still a large demand for cotton goods of all types.



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Send for attractive paper-weight sample, which is yours for the asking. Catalogues upon request.

Square edge bars for safe footing.
Hexagonal cross bars for neat appearance.

Gary-Riveted Grating :: Gary Stair Treads

STANDARD STEEL SPRING COMPANY
Open Steel Floor Grating Division
2700 East Fifth Avenue, Gary, Indiana

While cosmopolitan in its general appeal, and modern *up to this moment* in its equipment, there is a peculiar flavor of The Old South here which Southerners are quick to note and appreciate. They feel at home and come back to us again and again.

Rates $3.00 *per day and up. Every room with bath or shower. Centrally located.*

The Southern Hotel
BALTIMORE 2

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PIPE & FOUNDRY CO.
LYNCHBURG, VA.

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Supplies for Designing — Drafting
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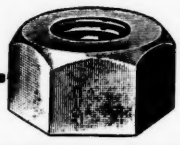
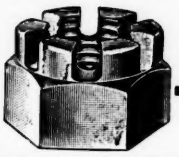
Hexagon Head Cap Screws Hexagon Semi-Finished Nuts

Special Screw Machine Products
to blue print or sample.

MID-WEST SCREW PRODUCTS CO.



3664 Park Ave.
St. Louis 10,
Missouri



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of Perforated Metal
ANY METAL • ANY PERFORATION

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PERFORATED METALS
For every purpose, Industrial and Ornamental

Steel, Stainless Steel, Monel Metal, Brass, Copper, Bronze, Aluminum, Zinc, Lead, Tin Plate and all other metals or materials perforated as required, and for all kinds of screens. Send for new Catalog.

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The "Quinn Standard"
FOR CONCRETE PIPE

The Quinn Standard is known as the best the world over, wherever concrete pipe is produced and used. Backed by over 30 years' service in the hands of hundreds of Quinn-educated contractors, municipal departments and pipe manufacturers who know from experience that **Quinn pipe forms and Quinn mixing formulas** combine to produce the finest concrete pipe at lowest cost.

Quinn Heavy Duty Pipe Forms

For making pipe by hand methods by either the wet or semi-dry processes. Built to give more years of service—sizes for any diameter pipe from 12 to 84 inches—tongue and groove or bell end pipe at lowest cost.

WRITE TODAY
Complete information, prices and estimates sent on request. Also manufacturers of Quinn Concrete Pipe Machines.

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ERDLE PERFORATED SHEET METALS

SIXTY YEARS' experience in Metal Perforating is your assurance of a satisfactory job.

Made to your specifications and shipped promptly.

Metal Sample Plate on Request.

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Peak Production at Low Cost
Manufacturers of Limestone Pulverizers, Gravel or Rock Crushing and Screening Plants, Conveying and Screening Equipment.

Write for Data and Illustrated Bulletins about our Lifetime Crushing Equipment

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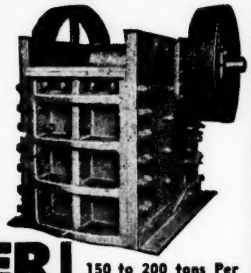

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CRUSHER and PULVERIZER CO.
2915-17 North Market St., ST. LOUIS (6), MO.

150 to 200 tons Per Hr. Crushing Steam Shovel Rock to 5" and 6" minus.

Ornamental and Industrial
PERFORATED METALS
We carry a large stock for immediate shipment.
Send for Our Catalogue.
Manhattan Perforated Metal Co., Inc., 43-17 37th St., L. I. City, N. Y.

MOUNT AIRY GRANITE
The North Carolina Granite Corp'n.
Mount Airy, N. C.

Middle South Power Companies Launch Intensive Development Program April 2

One hundred million dollars worth of new construction is contemplated through 1949 by four of the utility companies serving the middle South area, it was revealed recently by the four companies—Arkansas, Louisiana and Mississippi Power & Light Companies, and the New Orleans Public Service.

Coupled with it is the statement that the output from the new capacity is practically all under contract. In addition, these companies have on order more than 100,000 KW of generating capacity for delivery after 1949.

The four companies will have spent approximately $240,000,000 for new construction during the 20 years ending in 1949 and $146,000,000 in the first four postwar years.

Operating in the lower Mississippi River valley as an integrated system they will finance an intensive long-range advertising and development program for the region which will be formally launched April 2 in the middle of the Mississippi River at the juncture of the three states.

Governors, college presidents, health and agriculture commissioners and industrialists of the middle South have been asked to meet on that date in Greenville, Miss., nearest city to the three-state junction point, for group discussions looking to the future development of the region.

The phenomenal growth and advancement of the Middle South during the last decade, particularly since the war, is reflected in both the increased industrial use of electric energy and in cost for construction to supply that energy.

From 1931 through 1940 the four companies spent a total of $40,464,000 on construction in the three states. During the war years, 1941-1945, the system expenditures were $39,539,000. This was a yearly average of $8,000,000, or twice the average for the 10-year period prior to 1941. In 1946 expenditures totaled $23,200,000, or almost three times the average for the war years. Expenditures and estimated requirements for the period from 1947 through 1949 total $123,000,000.

This will bring the total expenditures of the four companies in the area to almost $146,000,000 for the first four postwar years, or more than one and a-half times the amount spent during the preceding fifteen-year period.

In the South
Industrial Opportunity
is Unlimited
Read the Record
$3.00 per year.

Appleton, LaCrosse Head New Link-Belt Offices

Link-Belt Co., Chicago, Ill., announce that they have established a district sales office in Charlotte, N. C., with headquarters at 617 Johnston Building, Charlotte 2.

Mr. Thomas H. Appleton, formerly district sales engineer at Baltimore, Md., has been appointed district sales manager in charge of this office.

Mr. Appleton entered Link-Belt employ in 1928 at the company's Philadelphia plant, serving subsequently at the Boston office and factory branch store, and, since 1945, at the Baltimore office.

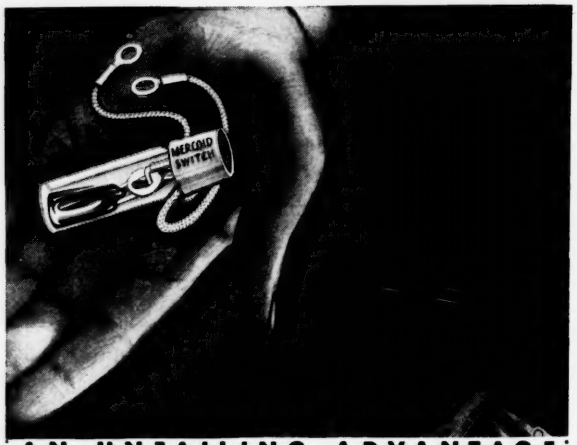
Mr. Appleton is not new to southern territory, as he has in reality been serving customers in Virginia and North Carolina ever since his transfer to Baltimore.

Mr. Emmart LaCrosse, Jr., formerly district sales engineer at Indianapolis, has been appointed district sales manager in charge of the Louisville office.

Mr. LaCrosse entered Link-Belt employ in 1937 at the Pershing Road plant, Chicago, serving subsequently at the company's Dallas plant, the Cleveland branch office, and, since 1941, at the Indianapolis branch.

Mr. LaCrosse is a B.S. graduate from Colby College, and later took additional graduate work in engineering at Harvard University.

He will be very ably assisted by Mr. Herschel O. Smith, who has been associated with Link-Belt since 1937, except for four years in the Armed Services.



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All Mercoid Controls are equipped exclusively with hermetically sealed mercury switches of special design and critically selected materials ● Mercoid mercury switches are known the world over for their dependable service. They are not affected by dust, dirt or corrosion; nor are they subject to open arcing with its attendant consequences of pitting, sticking or oxidized contact surfaces, all of which, are likely to interfere with normal switch operation ● That is why among other things, Mercoid Controls on the whole give you assurance of better control performance and longer control life – a distinct and unfailing advantage – the reason why they are also the choice of America's leading engineers for many important wartime industrial applications.

★MERCOID CONTROLS★
FOR HEATING, AIR CONDITIONING, REFRIGERATION, AND VARIOUS INDUSTRIAL APPLICATIONS
THE MERCOID CORPORATION · 4211 W. BELMONT AVENUE · CHICAGO · 41 · ILL.

Bristol Steel & Iron Works, Inc.
DESIGNERS — FABRICATORS — ERECTORS
STRUCTURAL STEEL
For Buildings, Bridges and All Industrial Purposes
BRISTOL, VIRGINIA-TENNESSEE
Capacity: 1500 *to* 2000 *tons per month.*

STRUCTURAL STEEL *for* BUILDINGS and BRIDGES
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Capacity 1200 *tons per month.*
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CONVERSE BRIDGE & STEEL CO.
Chattanooga, Tennessee
Structural Steel for all Industrial Structures, Buildings and Bridges
LARGE STOCK FOR IMMEDIATE SHIPMENT

GALVANIZING
Have it done by Philadelphia's OLDEST, the Country's LARGEST
—HOT DIP JOB GALVANIZER—
Joseph P. Cattie & Bros., Inc.
Gaul & Letterly Sts., Philadelphia, Pa.
GALVANIZED PRODUCTS FURNISHED

Wood By-Product Means New Industry For South

As construction of a plant to process "tall oil" neared completion at Panama City, Fla., the vast industrial possibilities of Southern Forests moved another step closer to realization.

Being built by the International Paper Co. and the American Cyanamid Co., the plant will derive "tall oil" from waste in pulp manufacturing. The by-product, on being refined, can be separated into oils for paints, varnishes, soaps, lubricants and other industrial liquids.

The process is good evidence of the increasing research being devoted to wood chemistry. More important, the discoveries thus far have proved to be fissionable, one advance giving rise to a group, which in turn leads into diverse fields of activity.

For the South generally, the wood products industry affords every Southern area an opportunity to participate. But to keep the industry moving forward will require initiative from land owners as well as from researchers and company operators.

To augment the timber tracts maintained by paper mills must come logs from farm lands. Both private industry and the federal government are spending large sums on research beneficial to the timber owner. To contribute to the further advancement of the forest industry a more exacting scientific management of timber lands seemed next in order for the South.

Already, several railroads serving have instituted programs designed to perpetuate the area's woodlands. To this effort must be added the interest of private landowners.

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CASH PAID

FOR CAPITAL STOCK or ASSETS

BY *large financially powerful diversified organization wishing to add another enterprise to present holdings.*

Existing Personnel Normally Retained

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FACTORY LOCATIONS AND FARMS

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Box 119, Pink Hill, N. C.

HENDERSONVILLE HAS ADVANTAGES . . . PLUS

Hendersonville, North Carolina, invites inspection of its exceptional facilities available to new industries. Located in the famed, "LAND OF THE SKY," this region offers invigorating year-round climate, ideal for furniture, textile, electrical, extractive and other industries.

AMPLE POWER
ABUNDANT PURE WATER
INTELLIGENT LABOR
FAVORABLE TAXES
CONVENIENT TRANSPORTATION
COMMUNITY SPIRIT

A rapidly developing trade and distribution center, this area offers splendid opportunities for alert industrialists.

Junior Chamber of Commerce,
P. O. Box 831,
Hendersonville, N. C.
In co-operation with Senior C. of C.

. . . Let us show you that HENDERSONVILLE has, "Advantages . . . Plus"

PLANT SITE FOR SALE

Approximately 60 acres at Palatka, Florida, with approximately 62,000 sq. ft. of sprinklered warehouse buildings. Docks on St. Johns River with 12-ft. channel to Jacksonville; water competitive rail rates to many points; railroad switches into property connect with Atlantic Coast Line, Southern, and Florida East Coast Railways; power lines into property from Florida Power & Light Co. All improvements in good condition.

Palatka (population 12,000) has low tax rates, excellent boiler feed water supply, good labor conditions.

WILSON CYPRESS COMPANY

PALATKA, FLORIDA

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Excellent mill site of 22 acres. Good water supply. Rock dam already built. One-eighth mile from Southern Railway track and station. Additional land adjoining available.

Correspondence invited

THE MUTUAL BANK Landrum, South Carolina

BRICK MANUFACTURING BUILDING

Three floors, total of 17,000 sq. ft. floor space. Building in good condition, steam heat, new plumbing. Suitable location for many kinds of manufacturing. With this property, warehouse, 2,900 sq. ft. with private side-track facilities on N & W Ry. Price $1.03½ per sq. ft. Exclusive agent.

CLAYTOR INSURANCE AGENCY

A. B. Claytor, Agent

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Nationally famous James River plantation is now offered for sale. An opportunity to acquire one of the really fine old Virginia plantations, at a reasonable price. Complete details to qualified purchaser.

G. B. LORRAINE

Law Building Richmond 19, Va.

Another GOOD PLACE TO LIVE, LABOR AND PROSPER

Situated on COOSA RIVER (soon to be opened—Rome to Mobile) 3 railroads; 2 paved highways (91 & 76); site of Ala. Ordnance Works great powder plant, now being converted to peacetime uses —newsprint plant; fertilizer factory and, probably, rayon mill. Several smaller industries already operating. Population 4,000; 3 schools; 7 churches; 350 Government dwellings; waterworks from 1200 g.p.m. DeSoto Spring; electric lighting and power; health unsurpassed.

ALL THIS and MORE can be found at CHILDERSBURG, (Talladega Co.) ALABAMA. Write Mayor for further information.

REBUILT MONOBLOC PUMPS--STANDARD FITTED

3 Ph., 60 Cy., 220/440 VO.

2—4DE5 Worthington, 7½ H.P. 1150 RPM Motor, 5" S., 4" D. Cap. 200/650 G.P.M. 56/38 ft. Head.

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6—Model A, Type 1½ ORV-2 Ingersoll Rand, 2 H.P. 3490 RPM Motors, 1½" S., 1" D. Cap. 60 G.P.M. 46 ft. Head.

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New G.E. Motors and Controls.

Strong Carlisle & Hammond steam traps, strainers, and reducing valves.

Approx. 35,000 square feet block fibre glass insulation.

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IMMEDIATE SHIPMENT

NEW RED LINE

BLOWERS & EXHAUSTERS

$70.00 & up

200 to 10,000 CFM

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1—48" x 120" M.D. Commercial Type Mangle
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1—7½ ton Morgan, 46'6" span, cab operated, 230 volts D.C.

2—10 ton American Monorail, floor operated, 3/60/220 A.C. — WITH RUNWAY

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"ANYTHING containing IRON or STEEL"

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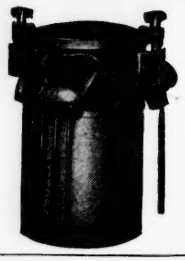

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in operating condition or burnt out. Mail us list giving complete nameplate data and stating condition.

We Rewind, Repair and Redesign all Makes and Sizes
ALL TRANSFORMERS GUARANTEED FOR ONE YEAR

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"AMERICA'S USED TRANSFORMER CLEARING HOUSE"

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Elec.: 676, 1300, 1578, 2200 & 2850 Ft.
Bltd.: 368, 540, 676, 870 & 1300 Ft.
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80—80,000 lb. capacity Box Cars.
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STEEL TANKS:
35—10,000, 15,000 & 20,000 Gal. Cap.
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Motors, A.C. and D.C., ¼ to 150 H.P. Transformers, 1 KVA to 100 KVA. Air Compressors; Blowers; Circuit Breakers; Belt Conveyors; Crushers; Drills; Fans; Generators; Grinders; Hoists; Lathes; M G Sets; Electric Locomotives; Mining Machines; Pumps; Rotary Converters; Starters, AC and DC; Tipple Equipment; R.R. Switches, 100# and 85#.

Clam Shell Bucket, single line, 1¾ yd.
Speed Reducers, 100 HP. & 250 HP.
Pulsometer #6R, size 3½" N.Y.E.
Bread Mixer, Peerless Size 5; Refrigerated with 20 HP. and 1½ HP. motors.
2 lathes 18" x 8' with 3/60/220 motor drives.
1 McCabe 26"-48" x 14' lathe with 3/60/220 motor.
3 Vertical milling machines #2 Milwaukee, one with motor in base.
1 Horizontal boring mill, 3" bar, single pulley drive.

Guyan Machinery Co., Logan, W. Va.

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FUEL OIL HEATERS

4—Whitlock Type R, extra heavy with valves and fittings. 300 sq. ft. 300 PSI shell test. 375 PSI oil side test. ¾" #16 BWG steel tubes. Thoroughly reconditioned.

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P. O. BOX 1318 TAMPA, FLA.

NEW TRANSFORMERS

200-15 KVA oil cooled, 1ph. 60 cy. pri. 13200 x sec. 110/220 v. Prompt shipment.

Philadelphia Transformer Co.

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STATIONARY — PORTABLE — NEW AND REBUILT

Electric—Gas—Diesel

Air Receivers—Aftercoolers—Vacuum Pumps

AMERICAN AIR COMPRESSOR CORP.

Dell Ave. and 48th St., North Bergen, N. J.

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BALTIMORE, MD.

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Distributors of Sand-Gravel-Stone and Commercial Slag

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Our complete organization with years of experience in successfully executing large construction contracts of various kinds is prepared to undertake the construction of earth, masonry and concrete dams, drydocks, dredging of all kinds, river and harbor improvements, deepening channels, hydraulic filling and rock work, tunnels, railroad construction, sewers and waterways.

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GRADUATES GO PLACES
because they are PROPERLY TRAINED

PRACTICAL SHOP TRAINING IN
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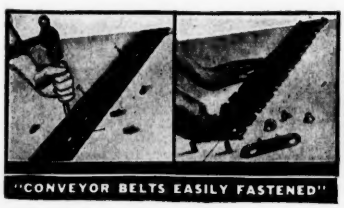

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